



An Introduction to Form Based Codes

***Presented by:
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Form Based Codes for Lowell Junction

- Form Follows Regulation
- Tools of Conventional Zoning
- The Form Based Code
 - What does it do differently?
 - How is it documented?
 - How is it administered?
 - Where else is it used?
 - What do people say about it?
- Two Massachusetts Cases
 - Hamilton Canal District: Lowell
 - Southfield: Weymouth / Abington / Rockland

Form Follows Regulation:

Form Follows Regulation: If this is what we want?



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Form Follows Regulation:

If this is what we want?



Form Follows Regulation:

How do we make sure not to get this instead?

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How do we make sure not to get this instead?

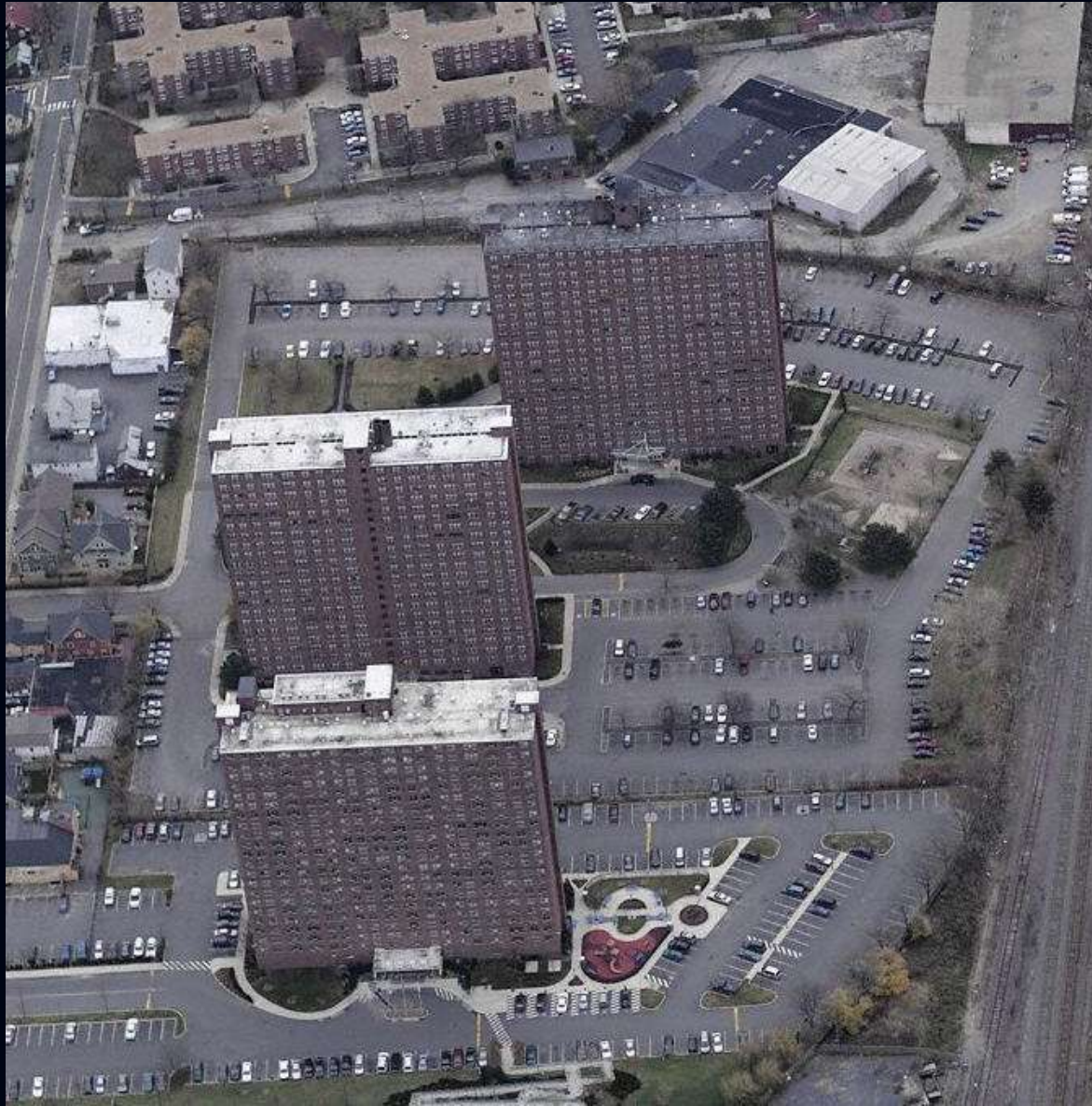


Form Follows Regulation: How do we make sure not to get this instead?



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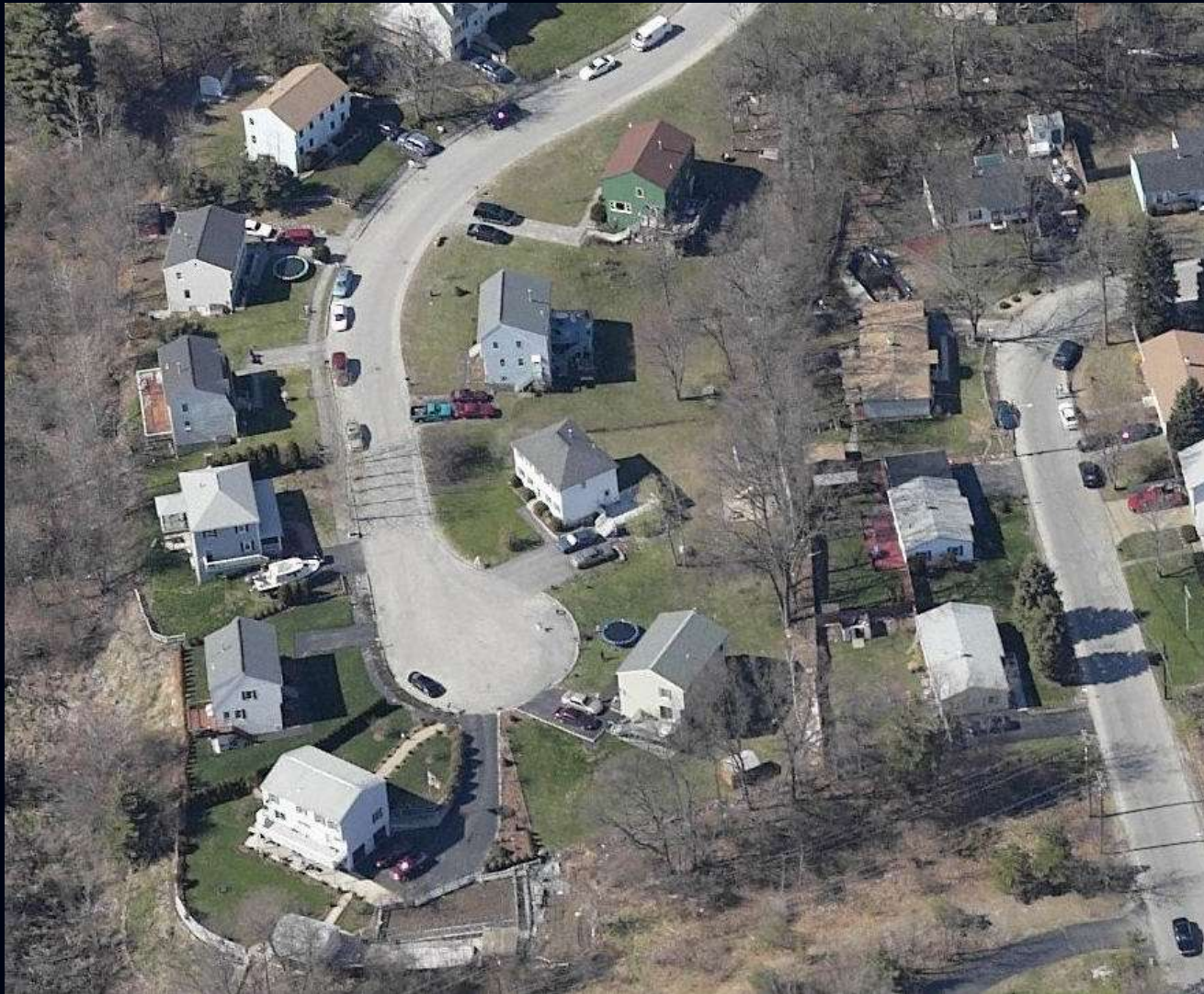
Form Follows Regulation: How do we make sure not to get this instead?



Form Follows Regulation: **How do we make sure not to get this instead?**



Form Follows Regulation: **How do we make sure not to get this instead?**



Form Follows Regulation: **How do we make sure not to get this instead?**



Conventional Zoning Tools:

What is Zoning?

- The public regulation of land use, bulk, density and dimensions as well as the administrative processes for enforcement.
- Rational planning model: start with a plan and adopt a zoning code based upon it.
- Many communities have zoning codes that are outdated and ineffective.

Conventional Zoning Tools:

How Does Zoning Work?

1. Regulates development within 'zones' where similar activities are or are not allowed
2. Identifies areas of a lot that cannot be built upon (i.e. setbacks)
3. Establishes activities allowed and not allowed in a zone
4. Often requires additional "design guidelines" that are not established as standards
5. Establishes a program for site plan reviews and/or discretionary special permits

Conventional Zoning Tools:

Other Land Use Regulation

- Subdivision, street standards, etc.
- State and local wetlands laws
- Flood plain regulations
- Building codes, fire codes, etc.
- Health codes
- Design and historic review

Conventional Zoning Tools:

The Limitations Of Zoning

- Emphasis on regulation by use
- Density regulations often do not address form or design
- Administration rarely balances certainty and flexibility
- Difficult to build public support for regulatory changes because it is difficult to answer the 'what will it look like' question

Conventional Zoning Tools:

The Limitations Of Zoning: Existing Tools

- Regulation of uses
- Setbacks
- Open space
- Parking requirements
- Subdivision standards
- Density
- Site plan review
- Special permits
- Design guidelines

Zoning Tools: Regulation of Allowed Uses

- 19. Baths, Turkish
- 25. Boxing arena
- 28. Chinchillas, retail sales
- 41. Eleemosynary institutions
- 42. Embalming business
- 95. Physical culture institution
- 109. Potato chip manufacturing
- 127. Tombstones, retail sales
- 135. Turkish Baths

Zoning Tools: Setbacks



Zoning Tools: Setbacks



Zoning Tools: Open Space



Zoning Tools: Open Space



Zoning Tools: Open Space



Zoning Tools: Parking Requirements



Zoning Tools: Parking Requirements



Zoning Tools: Street Standards



Zoning Tools: Density



Zoning Tools: Density



Zoning Tools: Density



Zoning Tools: Density



Zoning Tools: Density



Zoning Tools: Density

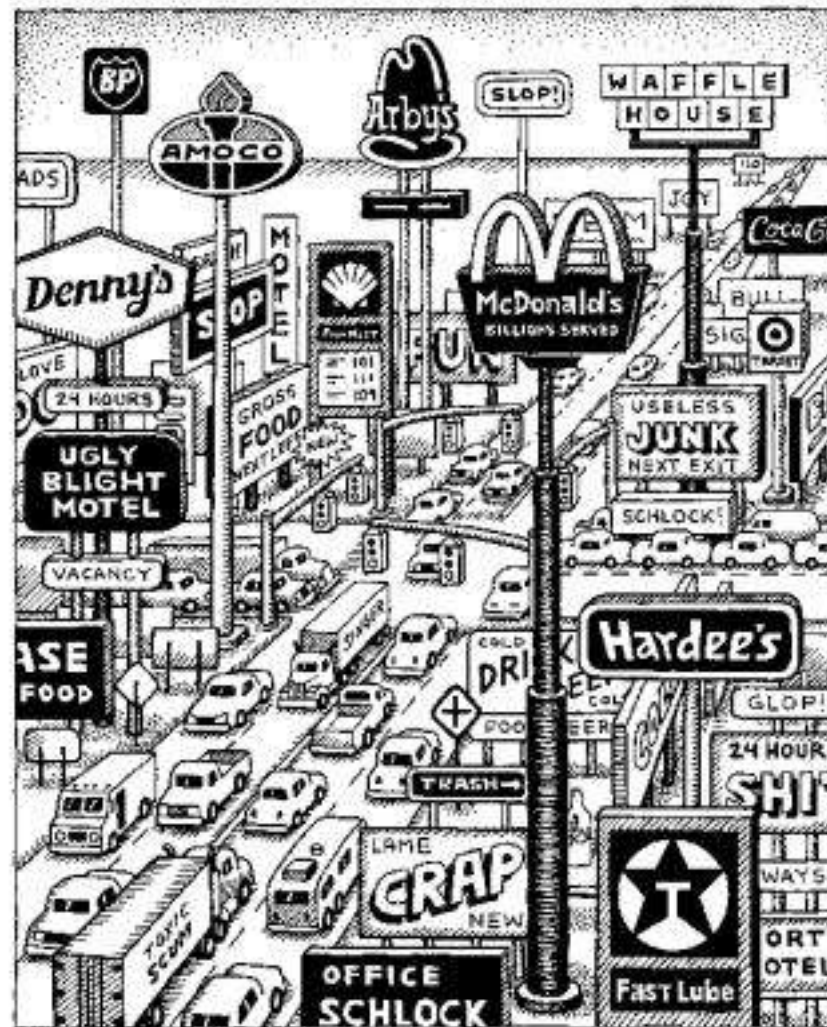


Zoning Tools: Density



Zoning Tools: Density









**CAVE PEOPLE
CITIZENS
AGAINST
VIRTUALLY
EVERYTHING**

Can a land use regulation system reflect what a community wants, rather than just prohibit what a community does not want?

Can a land use regulation system reflect community character?

The Appliance and The Grid



“If we know what the appliance is

- Christopher Alexander

The Appliance and The Grid



“If we know what the appliance is

We need to find the plugs to connect it to the existing power grids.”

- Christopher Alexander

The Appliance and The Grid

Lowell Junction Area Development Plan



- Town Meetings
- Zoning Boards of Appeals
- Planning Boards
- Conservation Commissions
- Town Engineers
- Fire Departments
- State Regulators
- MEPA Process
- Etc.

“If we know what the appliance is

We need to find the plugs to connect it to the existing power grids.”

- Christopher Alexander

The Form Based Code

The Form Based Code

- What does it do differently?
- How is it documented?
- How is it administered?
- Where else is it used?
- What do people say about it?

The Form Based Code

- **What does it do differently?**
- How is it documented?
- How is it administered?
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- What do people say about it?

The Form Based Code: What Does It Do Differently?

Conventional Zoning



Form-based Codes



Use

Management

Form

The Form Based Code:

What Does It Do Differently?

- Primarily works to define and create a “place”
- Regulatory focus on form instead of density and use
- Emphasize mixed uses
- Greater attention to streetscape, design, public realm and role of individual buildings in shaping public realm
- Up-front public participation during creation of the code limits the need for discretionary individual project review

The Form Based Code: What Does It Do Differently?

Tools of Traditional Zoning:

- Regulation of uses
- Setbacks
- Open space
- Parking requirements
- Subdivision standards
- Density
- Site plan review
- Special permits
- Design guidelines

The Form Based Code:

What Does It Do Differently?

Tools of Traditional Zoning:

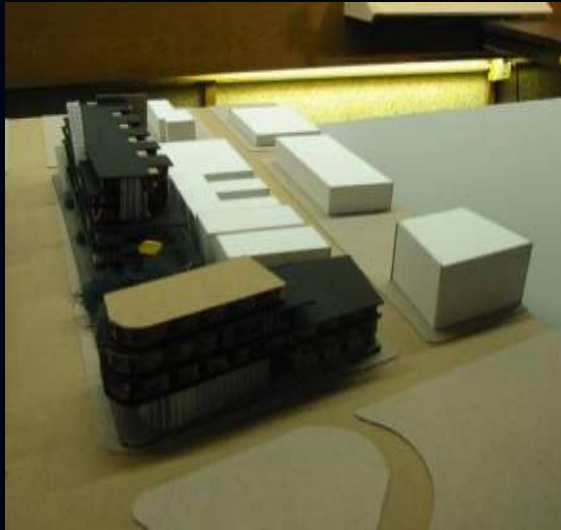
- Regulation of uses
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- Design guidelines

Tools of the Form-Based Code:

- Regulating plan
- Open Space Standards
 - Thoroughfare Standards
 - Public Open Space Standards
 - Private Open Space Standards
- Functional Design Standards
- Building Form Standards
 - Site Configuration
 - Building Configuration
 - Building Elements
 - Uses
- Administrative Process
- Architectural standards (optional)

The Form Based Code: What Does It Do Differently?

The Charrette



The Form Based Code

What Does It Do Differently?

1. Prescriptive not proscriptive
2. Public can see 'what happens where'
3. Regulate development on a lot by lot basis
4. Reflect a diversity of architecture within a community vision and legal framework
5. Define and codify a neighborhood 'DNA'
6. Concise, organized, and written for non-planners to understand
7. Reduce the need for 'design guidelines' and replace them with more enforceable regulation
8. Less oversight of individual projects by review bodies

The Form Based Code

- What does it do differently?
- **How is it documented?**
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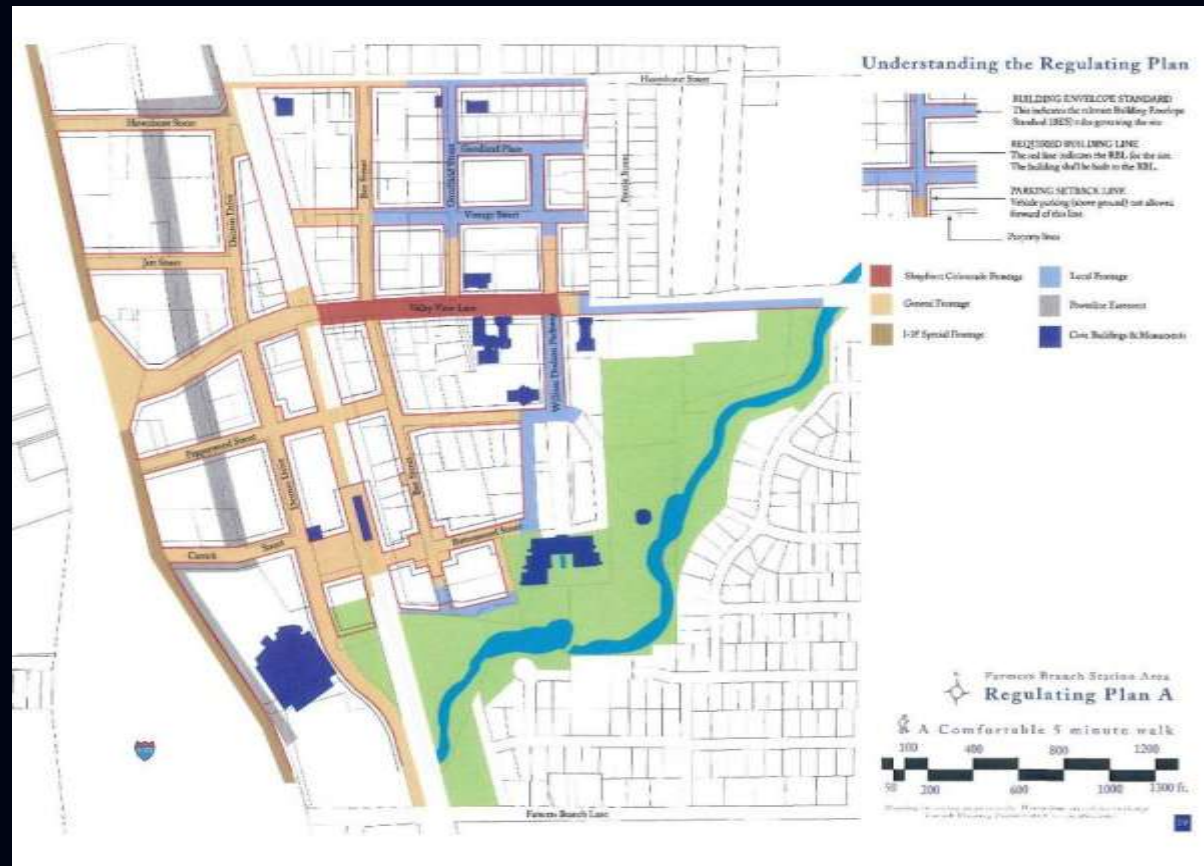
The Form Based Code:

How Is It Documented?

- Regulating plan
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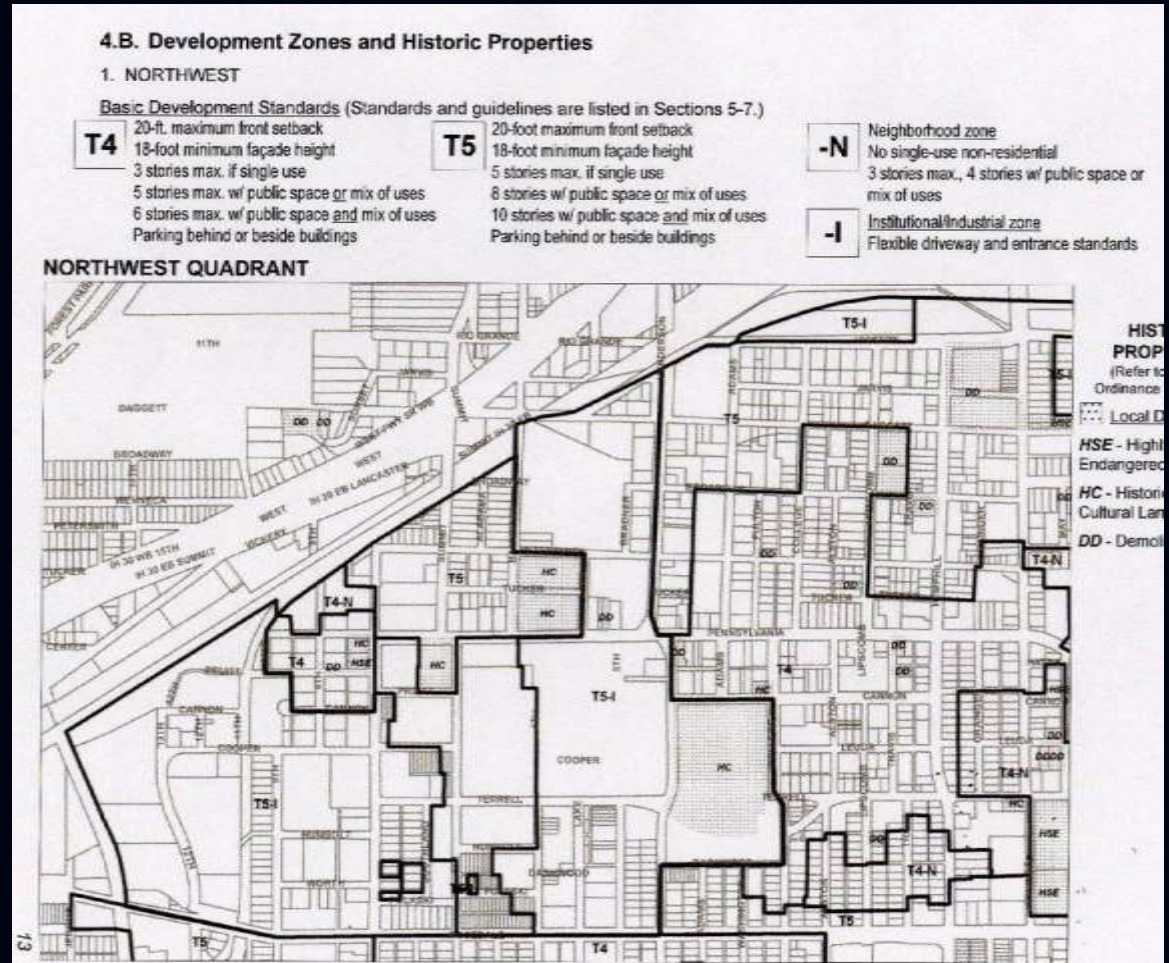
The Form Based Code: How Is It Documented?

Regulating Plan: Frontage Based



The Form Based Code: How Is It Documented?

Regulating Plan: Transect Based



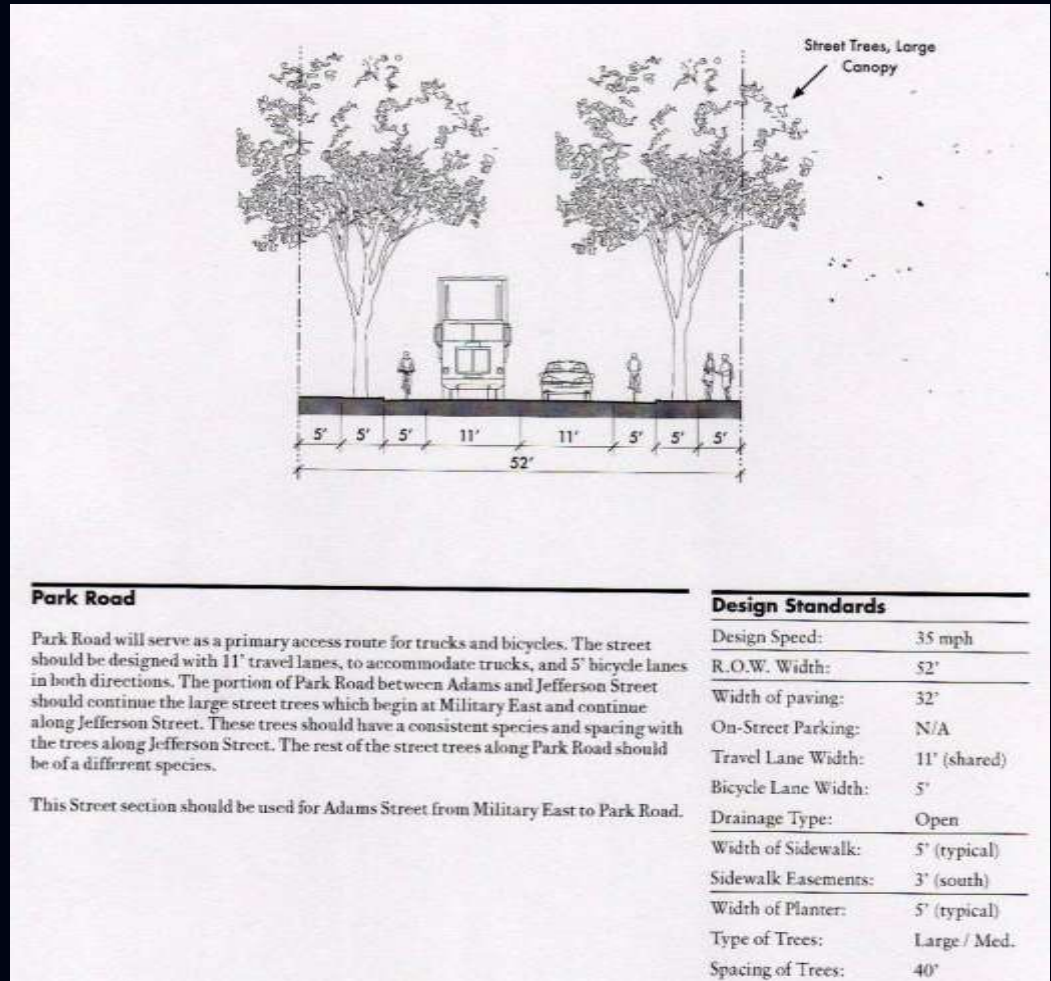
Regulating Plan: Lot Based



The Form Based Code: How Is It Documented?

Public Spaces:

Thoroughfare Standards



The Form Based Code: How Is It Documented?

Public Spaces:

Open Space Standards

I. Market Square

"This square is the window into Main Street. The eastern street has two way travel with diagonal parking on the building side. The western street is one way with parallel parking on the building side. Trees are optional in the right-of-way.

A. Building Placement:

Build-to-line location: 0 ft. from R.O.W. line
(typical)

Space Between Buildings: 10 ft. maximum

B. Building Volume:

Bldg. Width: 16 ft. minimum
160 ft. maximum

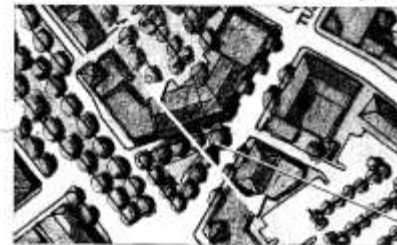
Bldg. Depth: 125 ft. maximum

Bldg. Height: 2 stories minimum
4 stories maximum
55 ft. maximum



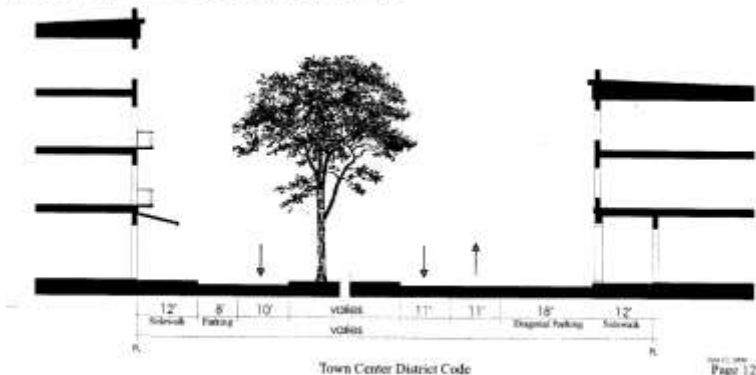
C. Notes:

1. Appurtenances may extend beyond the height limit.
2. Building fronts are required to provide shelter to the sidewalk by means of at least one of the following: arcade, colonnade, marquee, awning, or 2nd floor balcony.
3. All permitted uses are allowed on all floors.
4. Specific design of tree planting and landscaping layouts in and along this space shall be subject to DRC approval.
5. The alignment of floor-to-floor heights of abutting buildings is encouraged to allow for shared use of elevators.



This illustration depicts the character intended for Market Square.

Focal fountain terminates the mixed-use main street.



The Form Based Code: How Is It Documented?

Public Spaces:

Open Space Standards



Jefferson Ridge Zone Open Spaces

The Jefferson Ridge includes two prominent open spaces: the Officer's Square and the Cork Oak Ridge. Due to the historic significance of this area, landscape treatments should be carefully selected to ensure compatibility with existing historic structures and heritage trees, such as the area's existing cork oak grove.

Officer's Square

The Officer's Square is characterized by a formal, open, lawn that is framed by the former Lieutenant's Quarters to the west, the Commanding Officer's Quarters to the east, an extended Jefferson Street to the south, and a new building that is institutional in character to the north. The park will have a strong central visual element such as a prominent pavilion or monumental flagpole, and will be defined along its southern edge with a uniform hedge along Jefferson Street. The north, west, and east sides of the park may be planted with palms or trees with a high canopy that allow maximum visual permeability.

Type: Publicly Accessible Institutional Park

Size: .90 Acres

Uses: Formal gardens, passive open space, walking, bicycling

Features: Central pavilion and/or monumental flagpole, public walks, seating areas



Top: Jefferson Ridge Open Spaces.
Above: Area Plan.

The Form Based Code: How Is It Documented?

Functional Design Standards

NEAR SOUTHSIDE DISTRICT SECTION 5. DEVELOPMENT STANDARDS AND GUIDELINES

5.C. Building Location and Orientation (cont.)

3. PEDESTRIAN ENTRANCES

- a. **Primary pedestrian building entrances** shall be located on the street frontage of the building. For buildings fronting other public spaces, the primary pedestrian entrance shall be oriented to and accessible from the public space.
- b. **Individual retail entrances** – Each retail use with exterior ground level exposure along a street or public space shall have an individual public entry from the street or public space.
- c. **Corner building guideline** – Entrances to corner buildings with ground floor retail uses should be located at the corner.

PEDESTRIAN ENTRANCES



Pedestrian-oriented projects orient primary entrances to public sidewalks, and corner retail/service buildings often include corner entrances.

4. FENCING

- a. **Front yard perimeter fencing prohibited** – Conventional gated complexes with perimeter security fencing along public streets are prohibited. Specifically, exterior security fences and gates that are located along public streets, along private streets or walkways that are publicly accessible through a public use easement, or along publicly accessible open space shall not extend beyond building facades; i.e., these fences shall not be located in the area between building facades and the property line.
- b. **Privacy fences** – A front yard fence or railing not exceeding 4 feet in height may extend beyond building facades if the fence encloses a private patio, yard, or sidewalk eating area. The fence is not permitted to encroach on a required pedestrian walkway (see Section 5.B.3.b.).

FENCING



Conventional gated complexes are not allowed, but short privacy fences that clearly delineate private yards and patios are compatible.

5. DRIVE-THROUGH DESIGN STANDARDS

- a. **Guideline** – Conventional drive-through uses do not support a pedestrian-oriented environment and are inconsistent with the urban redevelopment goals for the Near Southside. Although drive-through facilities are discouraged, the following standards shall apply to facilities approved by the UDC.
- b. **Windows and stacking lanes** – Drive-through windows and stacking lanes shall not be located within the front yard setback or along facades that face a street; where possible, they shall be located to the rear of buildings.
- c. **Circulation** – The design and location of the facility shall not impede vehicular traffic flow and shall not impede pedestrian movement and safety. Driveways shall not be located on Main streets, such as Magnolia Avenue and South Main Street (see classification maps in Section 4.C.). Shared driveways and/or driveways located off of non-arterial streets should be used, where possible.
- d. **Screening** – Architectural elements, landscaping, and/or other screening elements shall be used to minimize the visual impacts of the drive-through facility.

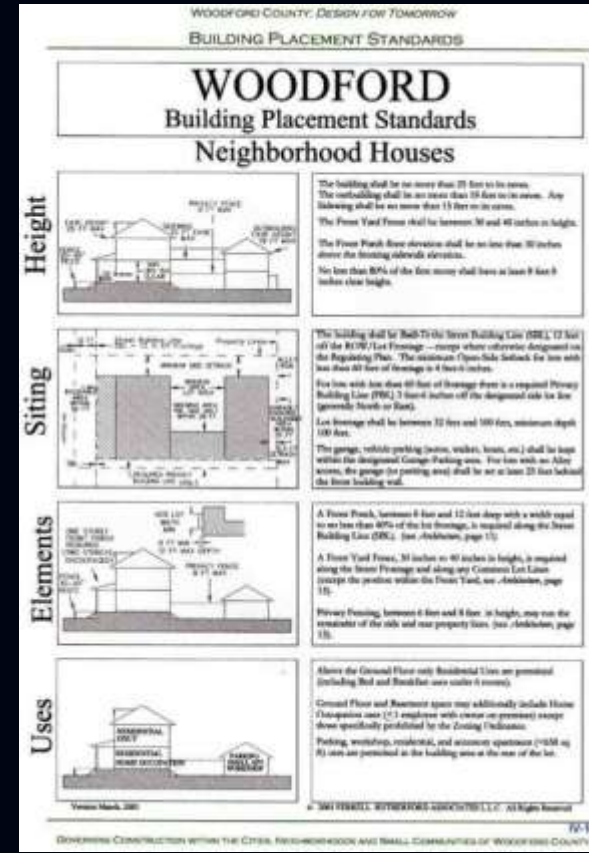
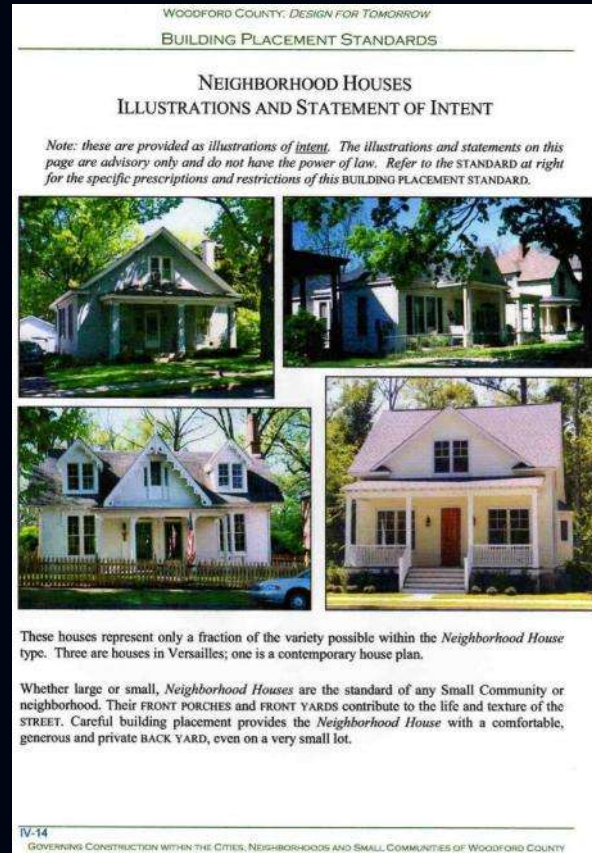
URBAN DRIVE-THROUGHS



The well-screened Wells Fargo drive-through facility is a good example of a compatible design that fits into a walkable environment.

The Form Based Code: How Is It Documented?

Building Form Standards




The Form Based Code: How Is It Documented?

Building Form Standards

WOODFORD COUNTY: DESIGN FOR TOMORROW
BUILDING PLACEMENT STANDARDS

ROW HOUSES ILLUSTRATIONS AND STATEMENT OF INTENT

Note: these are provided as illustrations of intent. The illustrations and statements on this page are advisory only and do not have the power of law. Refer to the STANDARD at right for the specific prescriptions and restrictions of this BUILDING PLACEMENT STANDARD.



Like the *Town House*, the *Row House* is an extremely efficient and sociable form of urban housing. *Row Houses* define the STREET with a solid plane wall. A consistent SIDE WING gives the BACK YARD complete privacy from the neighbors. *Row Houses* typically have front STOOPS or stairs and not FRONT PORCHES as found on *Town Houses*.

Floor plans should be relatively shallow to allow natural light and cross ventilation. Because they have fewer exterior walls, *Row Houses* can be cooled more efficiently than detached houses.

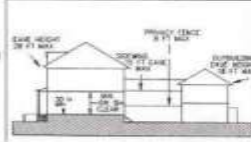
IV-22
GOVERNING CONSTRUCTION WITHIN THE CITIES, NEIGHBORHOODS AND SMALL COMMUNITIES OF WOODFORD COUNTY

WOODFORD COUNTY: DESIGN FOR TOMORROW
BUILDING PLACEMENT STANDARDS

WOODFORD Building Placement Standards

Row Houses

Height

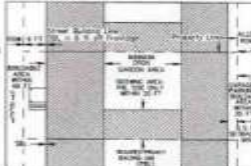


The building shall be no more than 28 feet to its eaves. Any outbuilding shall be no more than 18 feet to its eaves. Any sidewing shall be no more than 15 feet to its eaves.

The Front Yard Fence shall be between 30 inches and 40 inches in height. The first floor elevation shall be no less than 30 inches above the finished sidewalk elevation.

No less than 80% of the first story shall have at least 8 feet 8 inches clear height.

Siting




The building shall be Built-To the Street Building Line, 6 feet off the Lot Frontage — except where otherwise designed on the Regulating Plan.

Any Sidewing area construction shall be Built-To the Privacy Building Line (PBL) (generally the North or East side).

The lot/unit width shall be between 18 feet and 28 feet. No less than 80% of the lots in any phase shall have a minimum 70-foot depth. A maximum of 3 units shall be contiguous on one building and there shall be a 15 foot minimum gap between adjacent Row House buildings (side facades).

The garage, vehicle parking (dealers, buses, etc.) shall be within the Buildable Area. Parking access shall be through the Alley.

Elements




A Stoop, not more than 5 feet deep and 8 feet wide (plus steps) is permitted forward of the Street Building Line (SBL).

A Front Yard Fence, 30 to 40 inches in height, is permitted along the Street Frontage and along the Common Lot Lines of the Front Yard.

Privacy Fencing, between 6 and 8 feet in height, shall be placed along any unbuild rear and Common Lot Lines. (see: Architecture, page 15).

Uses



Above the Ground Floor only Residential Uses are permitted (including Bed and Breakfast uses under 6 rooms).

Ground floor and basement space may, in addition to Residential Uses, include Small Office Uses (< 3 employees with owner on premises) except those specifically prohibited by the Zoning Ordinance.

Workshop, residential, and accessory apartments (< 500 sq ft) and parking uses are permitted in the designated Buildable Area at the rear of the lot.

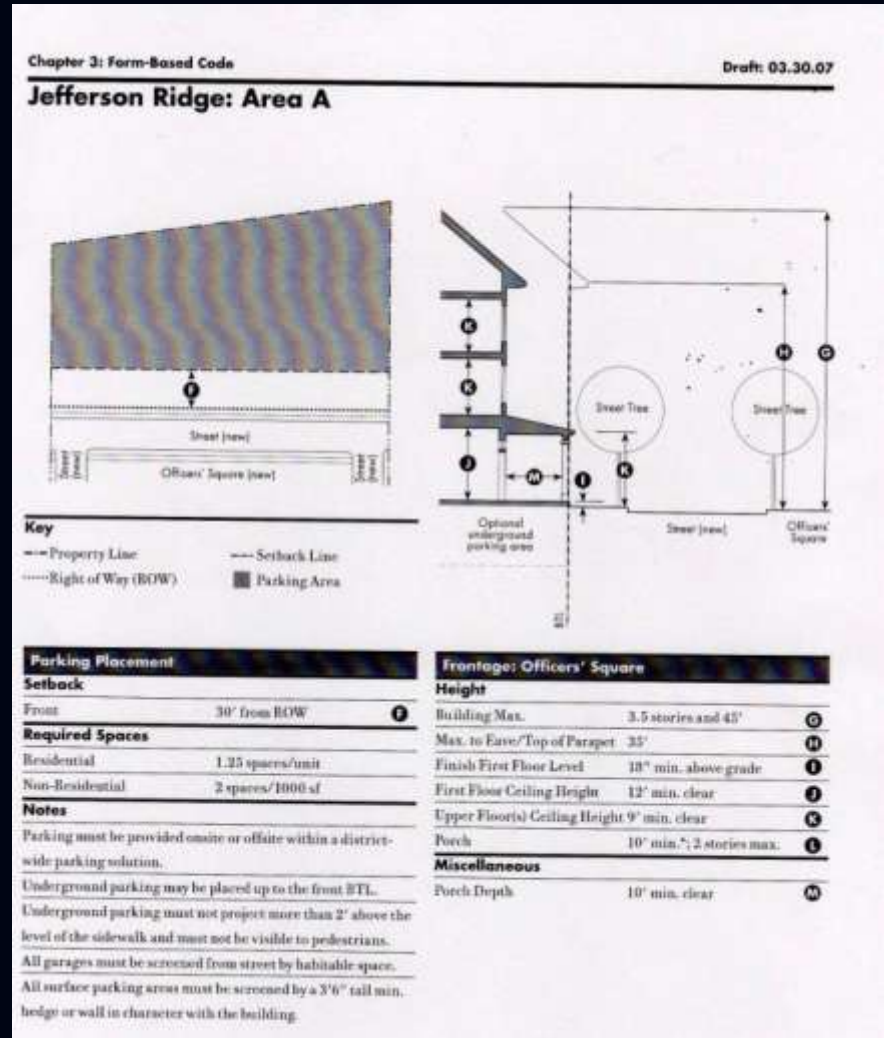
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IV-23
GOVERNING CONSTRUCTION WITHIN THE CITIES, NEIGHBORHOODS AND SMALL COMMUNITIES OF WOODFORD COUNTY

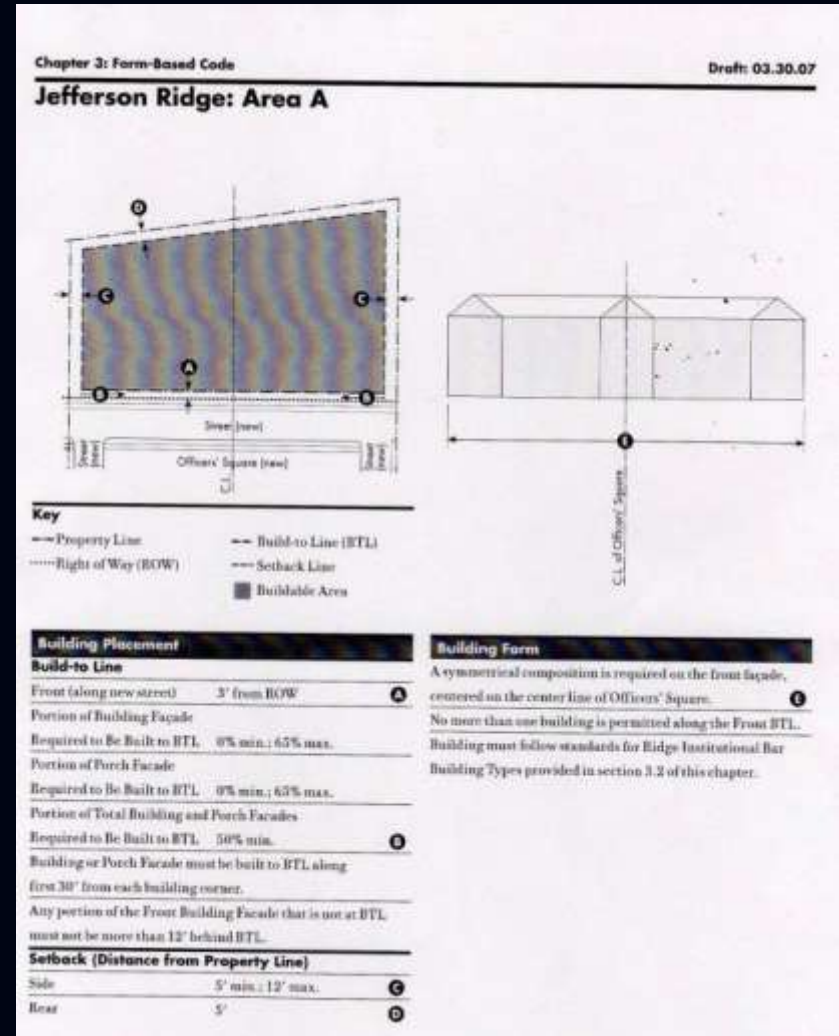
The Form Based Code: How Is It Documented?

Building Form Standards



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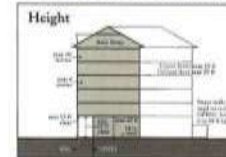
Building Form Standards



The Form Based Code: How Is It Documented?

Building Form Standards

B. Building Envelope Standards: Shopfront Colonnade Sites



Building Height
1. The height of the principal building is measured in stories.
2. Each principal building shall be at least four (4) stories in height, but no greater than ten (10) stories in height, except as otherwise provided in the REGULATORY PLAN.

Parking Structure Height

Where a parking structure is within 40 feet of any principal building (built after 2005) that portion of the structure shall not exceed the building's main or PARAPET HEIGHT.

Ground Story Height

1. The ground story finished floor elevation shall be equal to, or greater than, the adjacent exterior sidewalk elevation up to a maximum finished floor elevation of eighteen (18) inches.
2. The ground story shall have at least fifteen (15) feet of clear interior height (floor to ceiling) contiguous in the C/P.R.B.L. frontage for at least one-half (50%) of its area.
3. The maximum story height for the ground story is twenty-five (25) feet.

Upper Story Height

1. The maximum floor-to-floor story height for stories other than the ground is fourteen (14) feet.
2. At least eighty percent (80%) of each upper story shall have an interior clear height (floor to ceiling) of

at least nine (9) feet.

Measurements

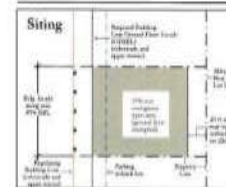
Measurements having a floor area greater than one-half (50) of the floor area of the street in which the measurement is situated shall be counted as a full story.

Street Wall Height

1. A STREET WALL shall not less than six (6) feet in height or greater than eighteen (18) feet in height shall be required along any C/P.R.B.L. frontage that is not otherwise occupied by a building on the lot.
2. STREET WALL height shall be measured from the adjacent public sidewalk or, when not adjacent to a sidewalk, from the ground elevation once construction is complete.

Other

Where a SHOPFRONT COLONNADE site is located within forty (40) feet of an existing single-family residential zoning district, the maximum story or STORY HEIGHT for that portion of the SHOPFRONT COLONNADE site shall be thirty-two (32) feet. This requirement shall supersede the minimum story requirement.



Siting
1. Buildings may occupy any portion of the lot behind the RBL (and any) exclusions of any setbacks required by this Code.
2. A contiguous open area equal to at least fifteen percent (15%) of the total BUILDABLE AREA shall be preserved on every lot. Such contiguous open area may be located anywhere behind the PARKING RETRACTION LINE, either at grade or at the second or third story.

Maximum of one hundred twenty (120) feet.

Buildable Area

1. Buildings may occupy any portion of the lot behind the RBL (and any) exclusions of any setbacks required by this Code.
2. A contiguous open area equal to at least fifteen percent (15%) of the total BUILDABLE AREA shall be preserved on every lot. Such contiguous open area may be located anywhere behind the PARKING RETRACTION LINE, either at grade or at the second or third story.

3. No part of any building, except overhanging eaves, awnings, or balconies shall occupy the remaining lot area.

Side Lot Setbacks

On a lot where a common lot line is shared with a single-family residential zoning district, the principal building shall be setback at least ten (10) feet from the shared lot line.

Garage and Parking

1. GARAGE ENTRIES or driveways shall be located at least twenty-five (25) feet away from any BLOCK CORNER or another GARAGE ENTRY on the same block, unless otherwise designated in the REGULATORY PLAN.
2. GARAGE ENTRIES shall have a clear height of no greater than sixteen (16) feet nor a clear width exceeding twenty-four (24) feet.

3. DESIGNATED GARAGE ENTRIES AND ALLEYS shall be the sole means of vehicular access to a lot.

4. GARAGE ENTRIES may be setback up to a maximum of twenty-four (24) inches behind the surrounding facade.

5. Vehicle parking areas on private property shall be located behind the PARKING RETRACTION LINE, except where parking is provided below grade.

6. Street requirements are not applicable to on-street parking.

Alleys

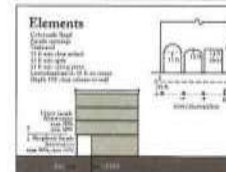
There is no required setback from ALLEYS. On lots having no alley access, there shall be a minimum setback of twenty-five (25) feet from the rear lot line.

Corner Lots

Corner lots shall satisfy the code requirements for the full RBL length unless otherwise specified in this code.

Unbuilt RBL and Common Lot Treatment

1. A STREET WALL shall be required along any RBL frontage that is not otherwise occupied by a building on the lot. The STREET WALL shall be located not more than eight (8) inches behind the RBL.
2. PRIVATE FENCES may be constructed along that portion of a common lot line not otherwise occupied by a building on the lot.



Penetration
1. Blank lengths of wall exceeding fifteen (15) linear feet are prohibited on all RBL/FACADE.
2. PENETRATION on the GROUND STORY FACADE shall comprise at least sixty percent (60%), but not more than twenty percent (20%) of the facade area situated between two (2) and ten (10) feet above the adjacent public sidewalk on which the facade fronts.
3. PENETRATION on the upper story facades shall comprise at least thirty percent (30%), but no more

than twenty percent (20%), of the facade area per STORY (measured as a percentage of the facade between floor levels).

4. No window may face or direct vision toward a common lot line within thirty feet (30) unless that view is contained within the lot (e.g. by a PRIVATE FENCE/SCREEN WALL) or the window sill is at least 6' above the finished floor level. All common lot lines within the Building Area are subject to the construction of building walls (with no setback) by the adjacent lot owner.

Building Projections

1. AWNINGS, BALCONIES, and STORIES shall not project closer than five (5) feet to a common lot line.
2. No part of any building, except overhanging eaves, balconies, bay windows, and awnings, as specified by the Code, shall encroach beyond the RBL.
3. No part of any building, except doghouses and signs, as otherwise permitted by the Code, shall encroach into the COLONNADE beyond the RBL.

Doors/Entries

Functioning entry doors shall be provided along ground story facades at intervals not greater than sixty (60) linear feet.

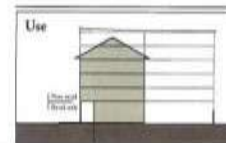
Colonnades

Where designated in the REGULATORY PLAN, COLONNADES shall:

1. Have a minimum interior floor to ceiling clear height of fifteen (15) feet (excluding blade signs and street lighting as specified in this Code).
2. Have minimum clearances (15) feet facade opening height to beam (or to the top of the arch and minimum eleven (11) feet in the spring point).
3. Have an intercolumniation of fifteen (15) feet on center.
4. Have a continuous public access easement of at least six (6) feet wide running adjacent to the columns/pier.
5. Have columns/piers with no single horizontal dimension greater than twenty-two (22) inches or less than ten (10) inches. This limitation shall apply between grade and eleven (11) feet in height.
6. Have 15 feet between the RBL and the RBL, except as otherwise specified in the REGULATORY PLAN.

Street Walls

A vehicle entry gate no wider than eight (8) feet or a pedestrian entry gate no wider than six (6) feet shall be permitted within any required STREET WALLS.



Ground Story
The GROUND STORY shall house RETAIL uses. See Height specifications above for the specific requirements.

Upper Stories

The upper stories shall house residential or commercial uses excluding RETAIL SPECIALTY and RETAIL TRADE uses (except those that have drive-in drive-out and are second story extensions of the GROUND STORY USE).

The Form Based Code: How Is It Documented?

Optional Architectural Standards

1. Building Walls

Required for all buildings:

* Exposed foundation walls (below the first floor elevation) shall be concrete (C.B.S. or reinforced, with stucco), brick, or natural/ manufactured stone.

* All Chimneys shall be made of brick, stucco, or natural or manufactured stone.

* The front facades of buildings are encouraged to be finished with more than one finish material. Heavier materials (Stone, Brick, Concrete with Stucco, etc.) shall be located below lighter materials (Wood, Hardie-Plank Siding, etc.). The change in material shall occur along a horizontal line, preferably at the floor level.

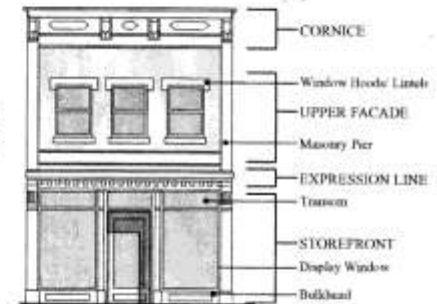
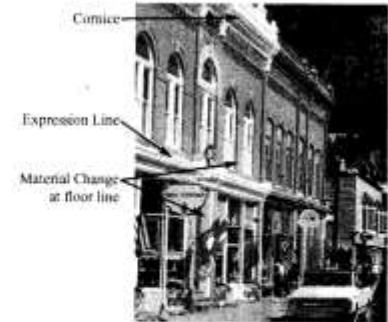
Required for all buildings except attached and detached single family houses:

* An expression line shall delineate the division between the first story and the second story. A cornice shall delineate the tops of the facades. Expression lines shall either be moldings extending a minimum of 2 inches, or jogs in the surface plane of the building wall greater than 2 inches. Cornices shall extend a minimum of 10 inches from the building wall.

Permitted Finish Materials:

- * Concrete masonry units with stucco (C.B.S.)
- * Reinforced concrete with stucco
- * "Hardie-Plank" siding (50-year siding product)
- * Wood (termite resistant, 50-year siding product): painted white, left natural, or painted/ stained with earth-toned colors, as approved by the Founders.
- * Brick (refer to section 5 for detailing)
- * Stone (natural or manufactured)
- * E.I.F.S., Fiberglass (as cornice material), and composite materials: must be located out of reach of pedestrians and must visually appear to have a hand troweled finish.
- * Wherever possible, Green building materials shall be used in the construction of building walls, including recycled-content sheathing, siding composed of reclaimed or recycled material, salvaged masonry brick or block, and locally-produced stone or brick.

Architectural Standards



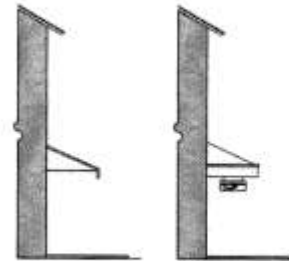
The Form Based Code: How Is It Documented?

Optional Architectural Standards

A. Special Building Elements and Appurtenances

Architectural Standards

1. Awnings/ Marquees



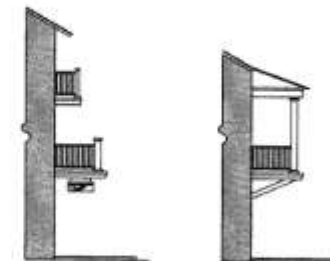
Depth = 6 ft minimum.
Height = 8 ft minimum clear.
Length = 25% to 100% of Building Front
(for Mixed-Use Buildings only).

The above requirements are for first-floor awnings and marquees. Awnings above the first floor shall comply to the same dimensional requirements except they may be 2 ft in depth minimum.

Marquees and Awnings shall occur forward of the Build-to Line and may encroach within the right-of-way upon approval and issuance of an encroachment license by the town of Boena Vista, but shall not extend into the planting zone and shall not extend within 24" of the curb.

Awnings shall be made of fabric or metal. High-gloss or plasticized fabrics are prohibited.

2. Balconies



Depth = 5 ft minimum for 2nd floor balconies.
Height = 10 ft minimum clear.
Length = 25% to 100% of Building Front.
(for Mixed-Use Buildings only)

Balconies shall occur forward of the build-to line and may encroach within the right-of-way with approval and issuance of an encroachment license by the town, but shall not extend into the planting zone and shall not extend within 24" of the curb.

Balconies may have roofs, but are required to be open, un-air-conditioned parts of the buildings.

On corners, balconies may wrap around the side of the building facing the side street.



The Form Based Code: How Is It Documented?

Optional Architectural Standards

Ridge Building Types

Special Elements

Chimneys shall be incorporated into the design of all buildings.

Porch and Stoops shall be residential in character, provide useable outdoor space, and shall be characterized by tall, classical proportions in keeping with overall massing.

Bay Windows may be one or two stories in height. If they are two stories, they should be designed with a horizontal break between floors. Bay windows should be used minimally.

Roof Dormers, when used, shall be in character with the rest of the building's architectural character. Hipped gables with deep overhangs are preferred.

Traditionally proportioned corners and eaves shall be built as a transition between the walls and roof forms.

Materials:

1. Trim may be wood or composition board.
2. Posts, balconies, porches, and stoops shall be made of wood, or masonry. Vinyl or vinyl-clad materials are not permitted.
3. Columns and piers shall be made of wood, brick, or cast stone. Vinyl or vinyl-clad materials are not permitted.
4. Railings shall be wood, wrought iron, or simulated wrought iron. Vinyl materials are not permitted.
5. Soffits and Porch Ceilings shall be fiber cement board, plaster, T&G (Tongue & Groove) Wood, or stucco.
6. Balconies shall be wood or metal, and may be open or covered.



Dormer Window



Chimneys



Formal porch



Historic Benicia Arsenal porch



2 Story Porch functioning as an outdoor room, activating the public realm



Continuous Porch Frontage and hipped dormers



Bay Window



Railings on porches shall be formally detailed to match the architecture

The Form Based Code: How Is It Documented?

Optional Architectural Standards

Ridge Building Types

7. Chimneys shall be brick, stone veneer, or stucco.

8. Cornice and eave may be wood, or composition board.

Colors:

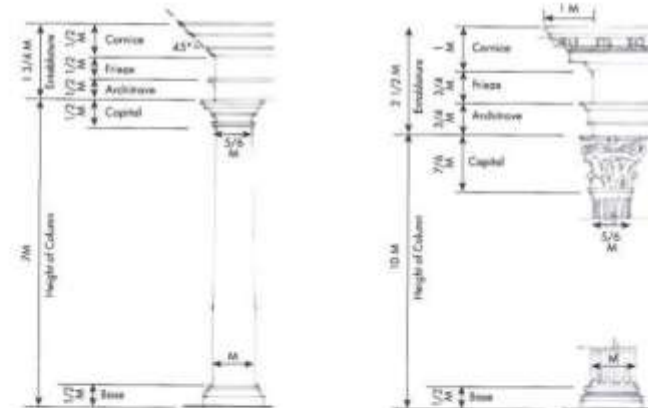
Trim: Trim colors may be white or off white.

Columns: White or off-white.

Railings: Wood railings must be painted white or off-white. Wrought iron grilles and rails must be painted black.



Cornice / Eave Detail



If a formal language is being used on a building, the application of the classical orders shall comply to the following proportions. A good starting point to establish your module (M) is to first divide on your column height. On the Doric Order, divide by 7 to get your module (M); on the Composite Order, divide by 10 to get your module (M). If a column is square rather than round, the 5/8 M width of the capital should be 1M.

The Form Based Code: How Is It Documented?

Optional Architectural Standards

Awning and Canopy Signs

Awning and canopy signs are painted on or attached to an awning or canopy above a business door or window.

Awning signs may be allowed on the shed portion of the awning, but is preferred on the valence flap. The flap height should be large enough for letters and symbols to be read easily.

- Maximum letter height: 75 percent of the height of the valence flap/shed area.
- Minimum valence height: 8 inches.
- Minimum vertical clearance: 8 feet.
- Material: Matte finish canvas, glass, or metal.
- Color: Solid or striped.



Awnings and canopies often enhance building architecture, and add color and interest to the streetscape.

The Form Based Code

- What does it do differently?
- How is it documented?
- **How is it administered?**
- Where else is it used?
- What do people say about it?

The Form Based Code

Types of Districts

- 40R districts
- Downtown and village centers
- New development districts (43D)
- Neighborhood or town-wide applications

The Form Based Code: Approval Process

- New zoning district and subdivision standards:
 - Recommendation on a zoning change by the Planning Board, with a zoning change approved by town meetings
 - Approval by the Planning Board of an addendum to the Subdivision Standards accepting the new street types and street standards for future public roadways within the district

The Form Based Code Administration Process

- Major public review of project objectives will occur at the code development level, with less of a need for scrutinizing individual project applications
- Streets require subdivision review before the start of a project or on a case by case basis
- Site development projects require simpler review for a 'certificate of consistency' with the code
- Variances, special permits and even site plan review can be eliminated from the process if appropriate.
- Special permits may be appropriate for deviation from the code

The Form Based Code

- What does it do differently?
- How is it documented?
- How is it administered?
- **Where else is it used?**
- What do people say about it?

The Form Based Code

Where Is It Used?

- New towns: Kentlands, Seaside, South Main
- California towns: Benicia, Petaluma, Azusa, Ventura
- Arlington, VA, on Columbia Pike
- Peoria, IL, downtown
- Fort Worth, TX, near south side district
- Farmers Branch, TX, transit station area
- Woodford, Kentucky
- St. Lucie County, Florida
- Massachusetts examples:
 - The 2004 Lowell Zoning Code (T district setbacks)
 - 40R districts in Brockton and Kingston
 - Southfield (South Weymouth Naval Air Station)
 - Hamilton Canal District, Lowell, MA

The Form Based Code

- What does it do differently?
- How is it documented?
- How is it administered?
- Where else is it used?
- **What do people say about it?**

The Form Based Code

What Do People Say About It?

“It shortens the review time for projects and gives developers a better idea of what the city requires”

Mike Moore, City of Petaluma, CA

The Form Based Code

What Do People Say About It?

“(Form Based Codes) will provide a consistency of how neighboring properties will be improved.”

Michael Arendt, Luther Burbank Savings Bank

The Form Based Code

What Do People Say About It?

“The easiest way to facilitate . . . projects is for municipalities to conduct and complete the environmental review, establish the desired land use, proscribe design guidelines and expedite the application review.”

Frank Denney, Home Builders Assoc. of Northern CA

The Form Based Code

What Do People Say About It?

“We can’t tell if the (form-based code) is a radical, green left-wing document or a developer-friendly, market based right-wing one”

Jose Sanchez, Santa Rosa Press-Democrat

Two Massachusetts Cases

- Hamilton Canal District:
Lowell
- Southfield:
Weymouth / Abington / Rockland

Two Massachusetts Cases

- **Hamilton Canal District:
Lowell**
- Southfield:
Weymouth / Abington / Rockland

The Form Based Code HCD Development Site

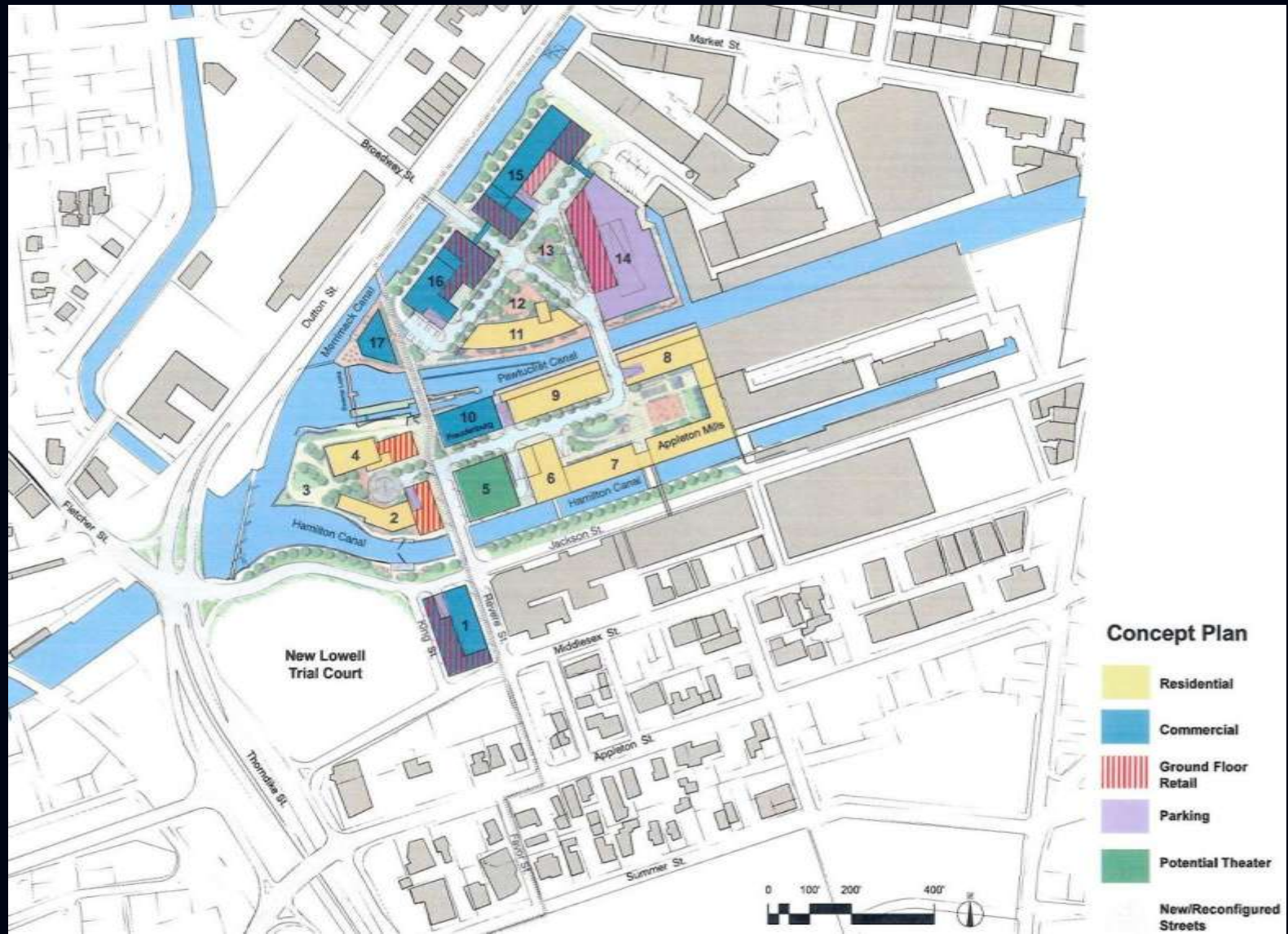


The Form Based Code

HCD Development Team: Trinity Financial



The Form Based Code HCD Master Plan

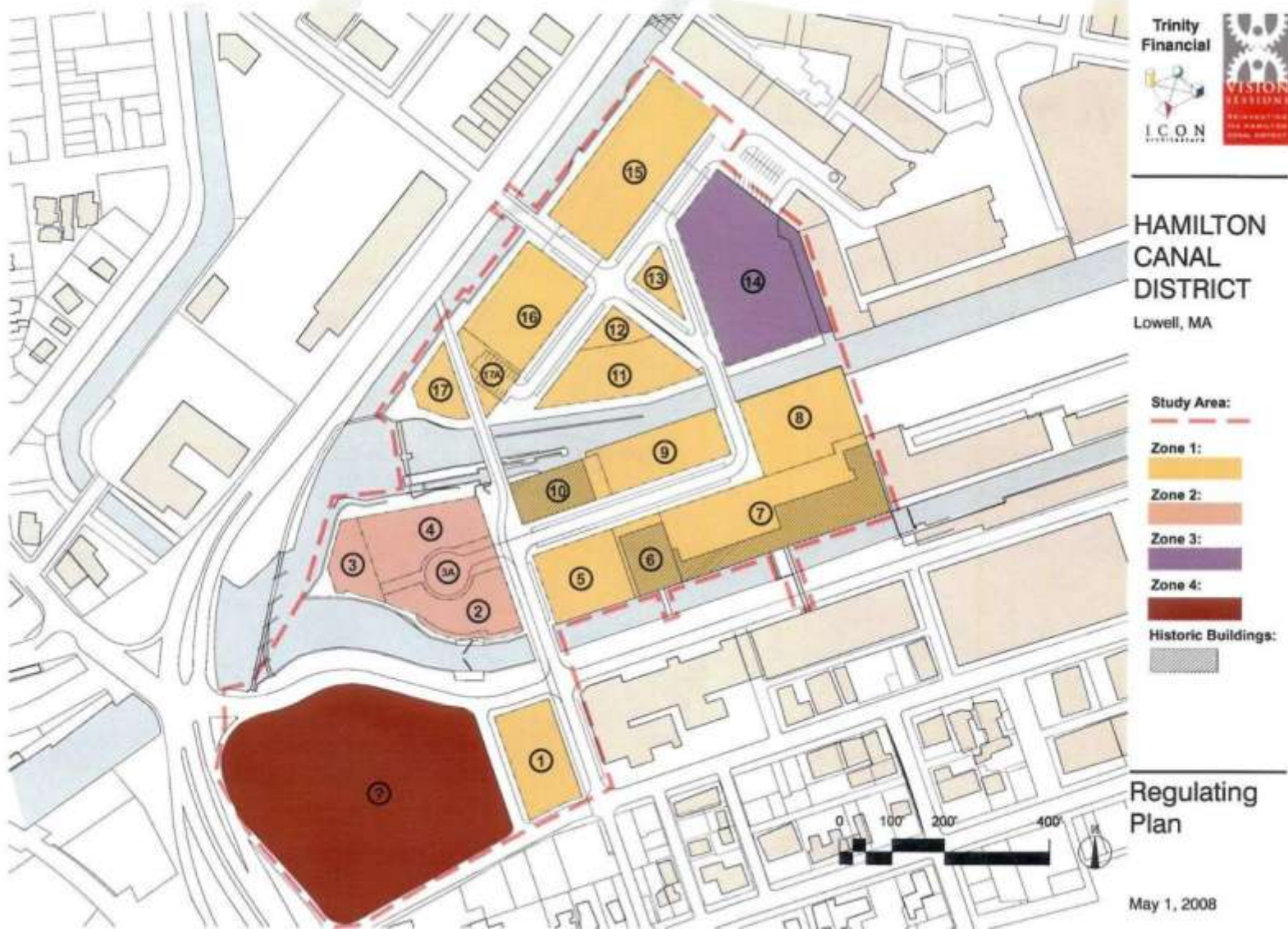


The Form Based Code

HCD Master Plan



The Form Based Code HCD Regulating Plan



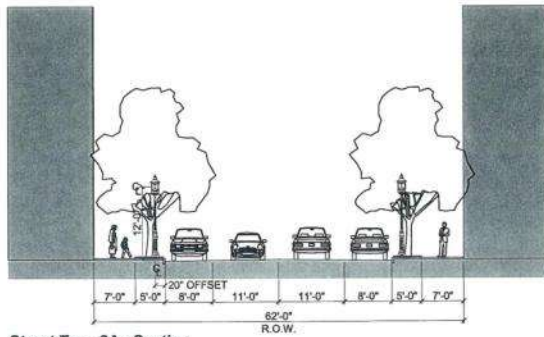
The Form Based Code

HCD Thoroughfare Standard

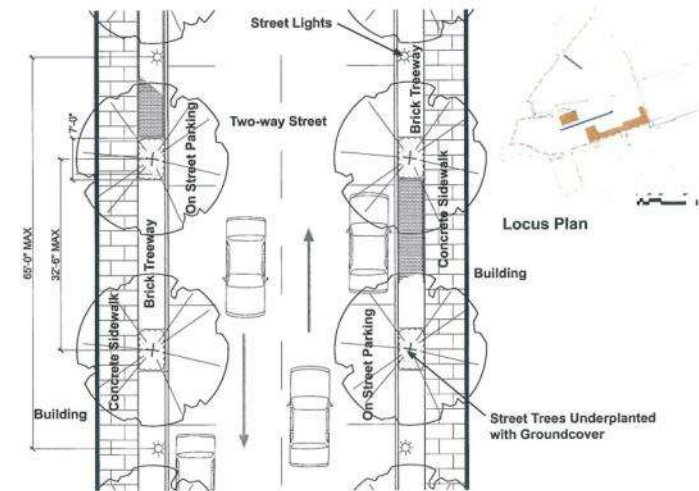
Form Based Codes: Streets Type 2A

Draft: April 2008

Hamilton Canal District



Street Type 2A - Section



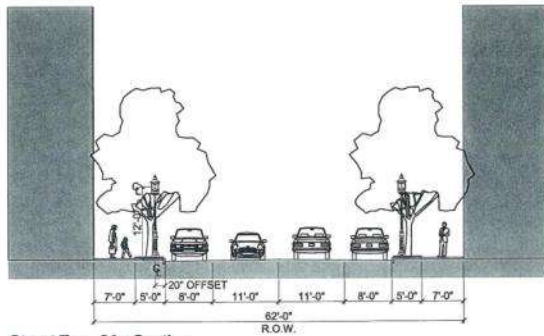
Street Type 2A - Plan

The Form Based Code

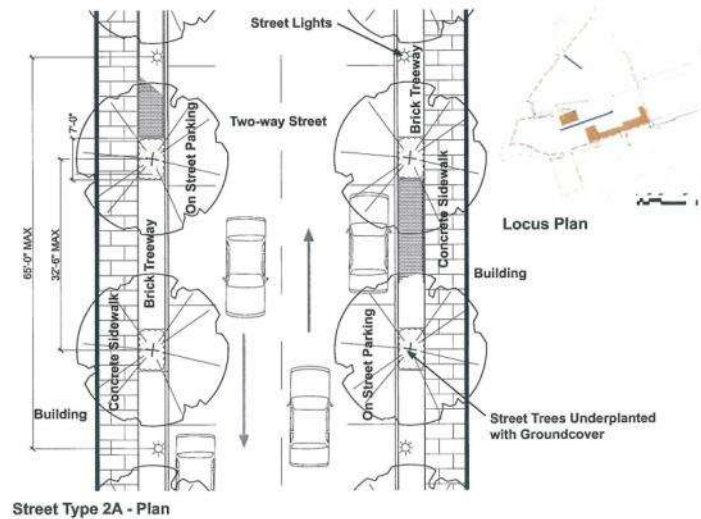
HCD Thoroughfare Standard

Form Based Codes: Streets Type 2A Hamilton Canal District

Draft: April 2008



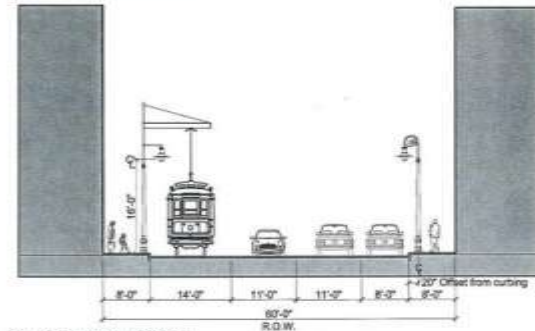
Street Type 2A - Section



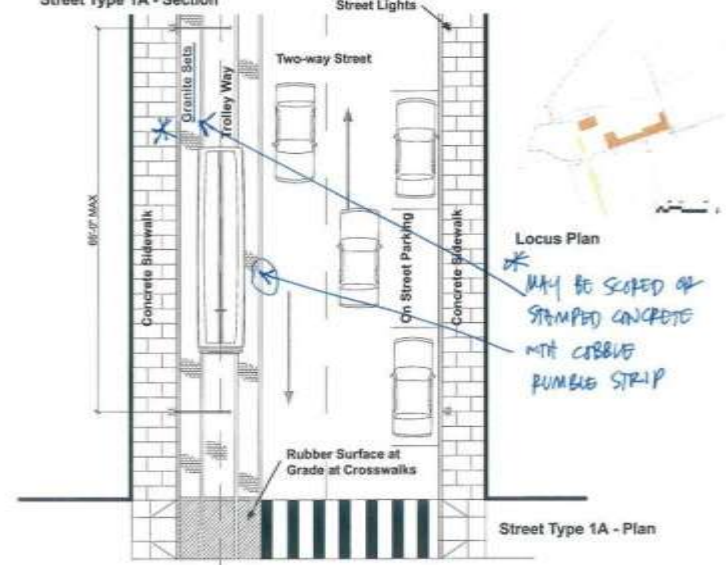
Street Type 2A - Plan

Form Based Codes: Streets Type 1A Hamilton Canal District

Draft: April 2008



Street Type 1A - Section



Street Type 1A - Plan

The Form Based Code

HCD Functional Design Standards

- Functional design of loading docks
- Design of parking entrances
- Permissible location for parking entrances
- First floor treatments
 - Transparency
 - Access
 - Privacy for residential units
- Rooftop equipment
- ADA accessibility issues
- Others to be determined

The Form Based Code

HCD Building Form Standard

Form-Based Code

Draft: 5/1/2008

Hamilton Canal District

Standards for Parcel 1

A: Site Configuration

North Side: 0' setback with 55% min. frontage along BTL
East Side: 0' setback with 30% min. frontage along BTL
South Side: 0'-20' setback
West Side: 0' setback with 30% min. frontage along BTL
Frontage: Any portion of the building not built on the BTL must not be more than 50' behind the BTL
Lot Size: .5 acre
Coverage: 100% max. (No more than one building is permitted on this site.)

B: Building Configuration

Height: 55' min. & 85' max.
Floors: 10' min. clear first floor
Encroachment: May be allowed at 10' min. above the street level & extend out 3' max.
Projections: May be allowed at 10' min. above the street level & extend out 6' max.

C: Building Elements

- Any vehicular access must be provided along the North or West side of the site.

D: Use

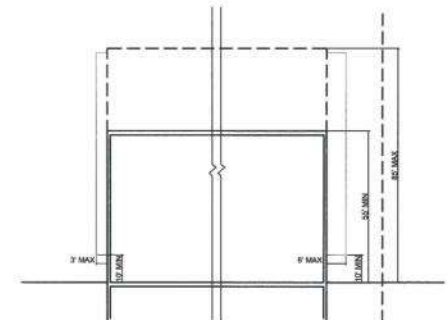
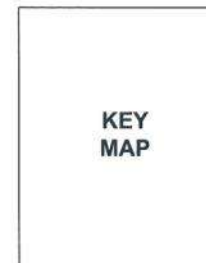
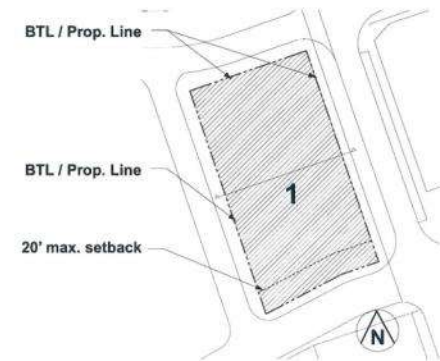
Canal Level: NA
Street Level: Residential, Retail, Institutional, Office
Upper Levels: Residential, Institutional, Office

Form-Based Code

Draft: 5/1/2008

Hamilton Canal District

Property Line: Build To Line: Setback Line: Buildable Area:



The Form Based Code

HCD Building Form Standard

Form-Based Code

Draft: 5/1/2008

Hamilton Canal District

Standards for Parcel 1

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 Frontage: Any portion of the building not built on the BTL must not be more than 50' behind the BTL
 Lot Size: .5 acre
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B: Building Configuration

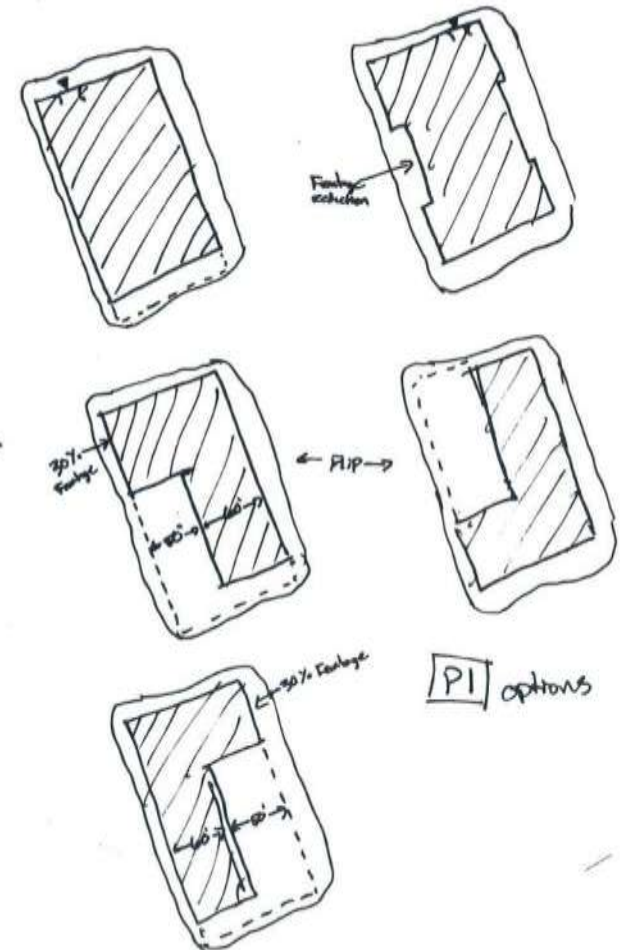
Height: 55' min. & 85' max.
 Floors: 10' min. clear first floor
 Encroachment: May be allowed at 10' min. above the street level & extend out 3' max.
 Projections: May be allowed at 10' min. above the street level & extend out 6' max.

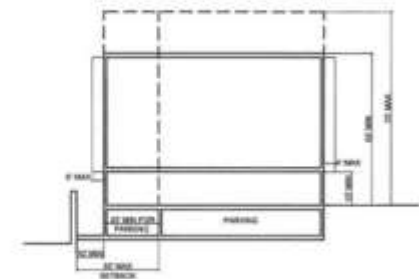
C: Building Elements

- 1.) Any vehicular access must be provided along the North or West side of the site.

D: Use

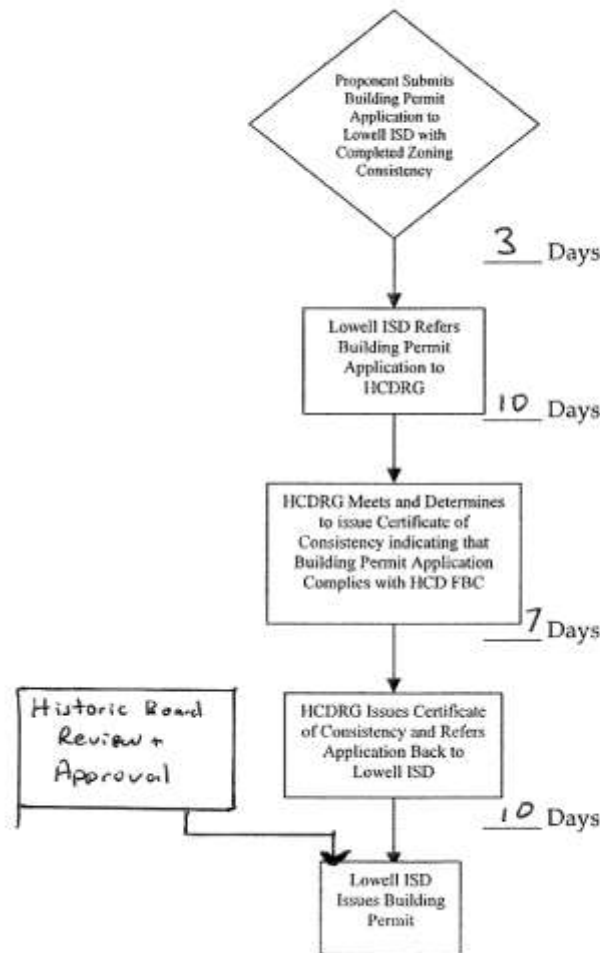
Canal Level: NA
 Street Level: Residential, Retail, Institutional, Office
 Upper Levels: Residential, Institutional, Office



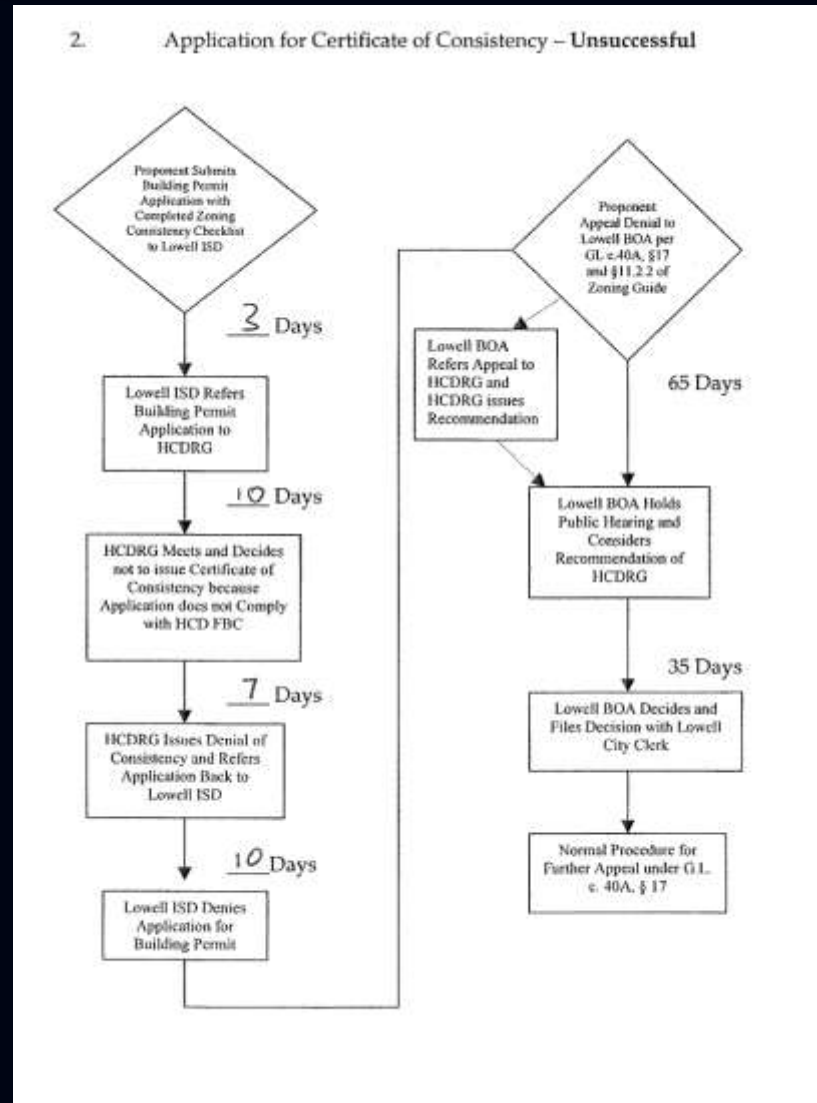


The Form Based Code HCD Administration Process

1. Application for Certificate of Consistency – Successful

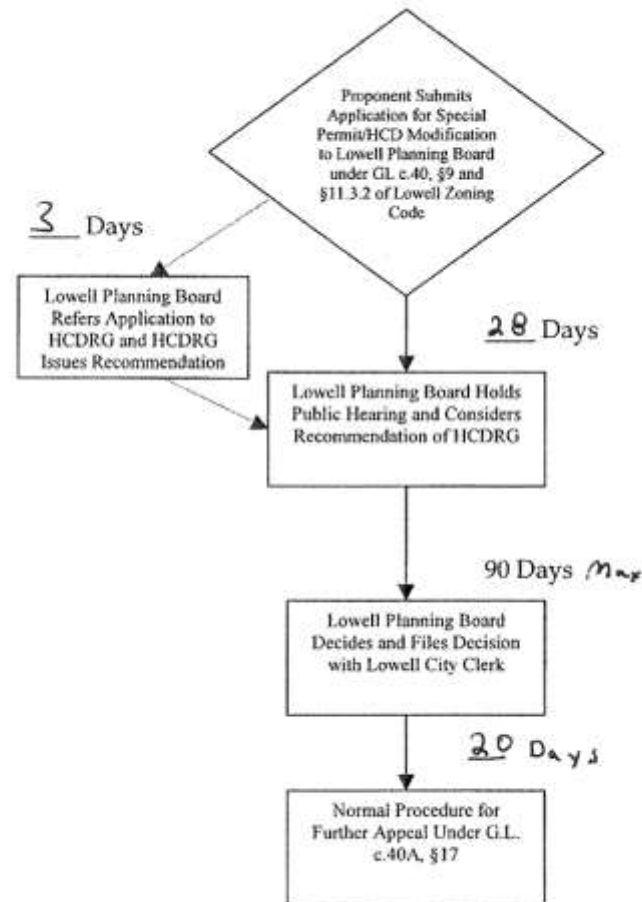


The Form Based Code HCD Administration Process



The Form Based Code HCD Administration Process

3. Application for Special Permit for Modification



Two Massachusetts Cases

- Hamilton Canal District:
Lowell
- **Southfield:**
Weymouth / Abington / Rockland

The Form Based Code Southfield Project



Transit Village

2/20/2014



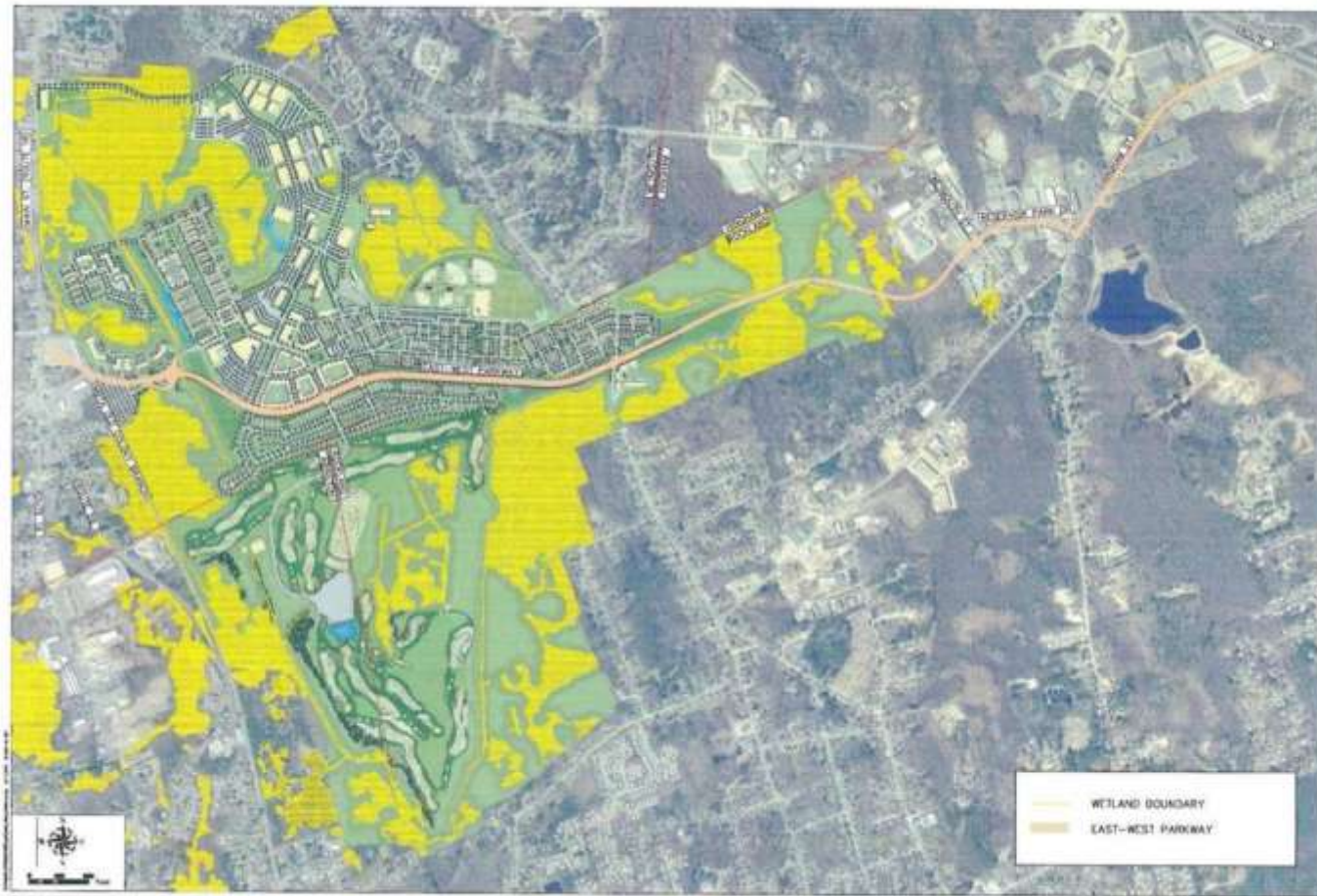
Naval Air Station Development Project

Transit Village Rendering

Figure 4.2-1b

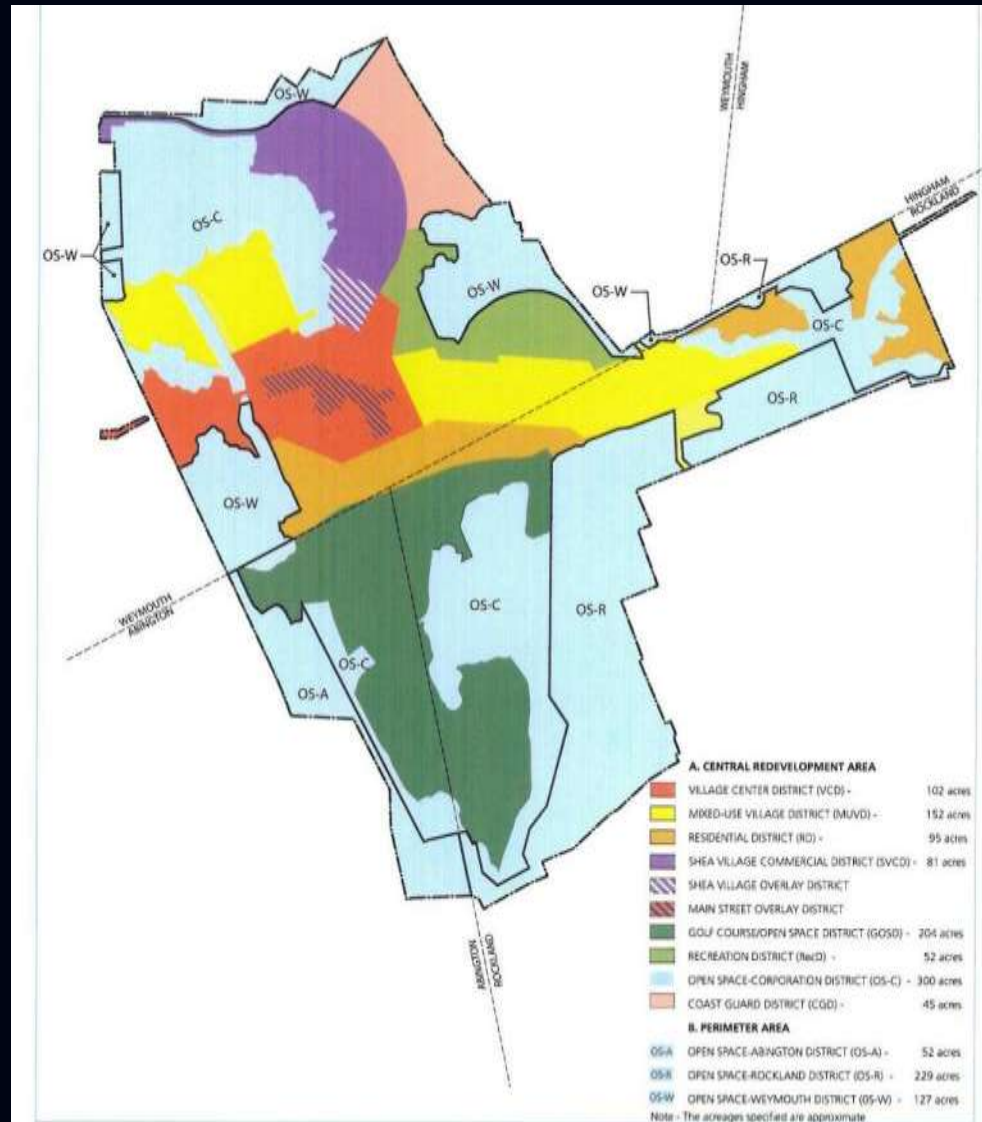
The Form Based Code

Southfield Master Plan



The Form Based Code

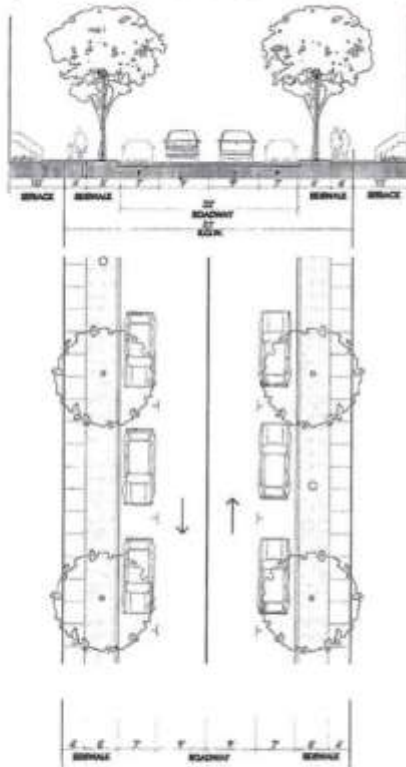
Southfield Regulating Plan



The Form Based Code

Southfield Thoroughfare Standard

N.A.S. South Weymouth / Village Center Plan



NOTE:
1. EXHIBIT FOR ILLUSTRATIVE PURPOSES ONLY

Street Design Requirements
ADT = 1,500
Minimum Curve Radius = 100'

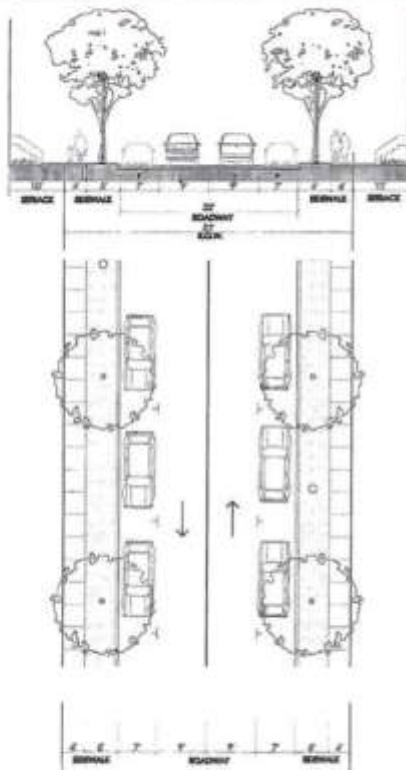
Figure 4-13

Standard Neighborhood Street

The Form Based Code

Southfield Thoroughfare Standard

N.A.S. South Weymouth / Village Center Plan



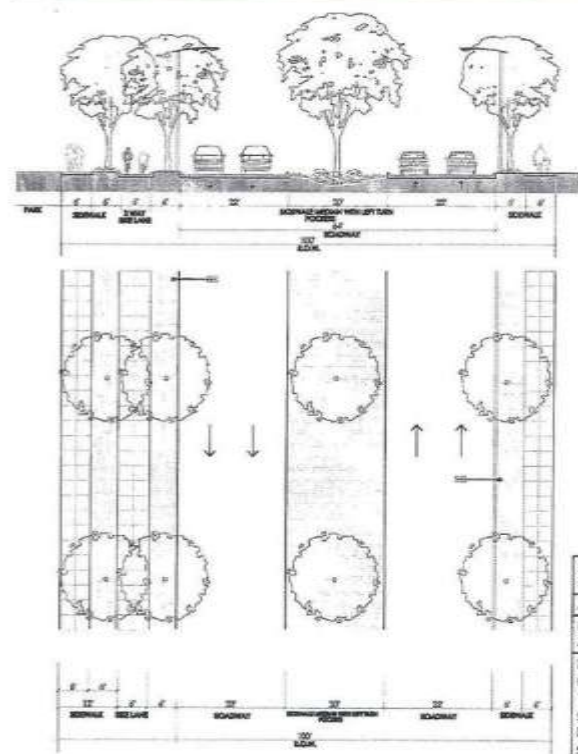
Street Design Requirements	
ADT = 1,500	
Minimum Curve Radius = 100'	

NOTE:
1. EXHIBIT FOR ILLUSTRATIVE PURPOSES ONLY.

Figure 4-13

Standard Neighborhood Street

N.A.S. South Weymouth / Village Center Plan



Street Design Requirements	
ADT = 30,000	
Design Speed = 45 mph	
Minimum Curve Radius: 1000' with no superelevation; 800' with 2% superelevation	

NOTE:
1. EXHIBIT FOR ILLUSTRATIVE PURPOSES ONLY.

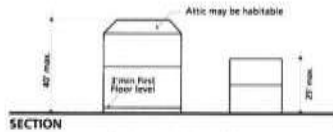
Figure 4-10

Parkway: Outside Village Center District, without Parking

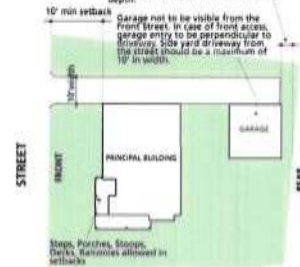
The Form Based Code

Southfield Building Form Standard

SINGLE FAMILY HOUSE - 5,000 to 10,000 sq.ft. LOT (SF>5)



5' min. Rear setback. Any additional setback should ensure a driveway access from the rear of lot not less than 20' in depth.



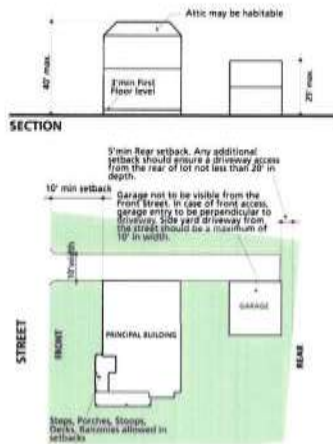
(* Photos are illustrative only)

LOT OCCUPATION	Lot Area	5,001 sq.ft. minimum - 10,000 sq.ft. maximum
	Lot Coverage	40% maximum
BUILDING SETBACKS	Front	10 feet minimum
	Side	10 feet minimum
	Rear	5 feet minimum
FRONTAGE		20 feet minimum
BUILDING HEIGHT	Principal Building	40 feet maximum
	Out Building	25 feet maximum
PARKING	Spaces	maximum 3/unit - minimum 1/unit
	Area	30 feet x 24 feet maximum
	Access	Entered from front or rear. On corner lots, side yard access is permitted.
USES		Residential.
DISTRICTS		Residential District

The Form Based Code

Southfield Building Form Standard

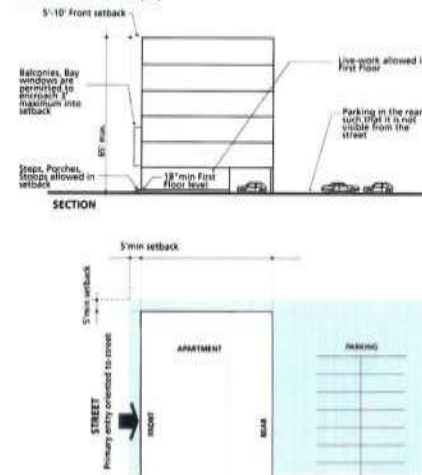
SINGLE FAMILY HOUSE - 5,000 to 10,000 sq.ft. LOT (SF>5)



(* Photos are illustrative only)

LOT OCCUPATION	Lot Area	5,001 sq.ft. minimum - 10,000 sq.ft. maximum
	Lot Coverage	40% maximum
BUILDING SETBACKS	Front	10 feet minimum
	Side	10 feet minimum
	Rear	5 feet minimum
FRONTAGE		20 feet minimum
BUILDING HEIGHT	Principal Building	40 feet maximum
	Out Building	25 feet maximum
PARKING	Spaces	maximum 3/unit - minimum 1/unit
	Area	30 feet x 24 feet maximum
	Access	Entered from front or rear. On corner lots, side yard access is permitted.
USES		Residential.
DISTRICTS		Residential District

APARTMENTS (A)



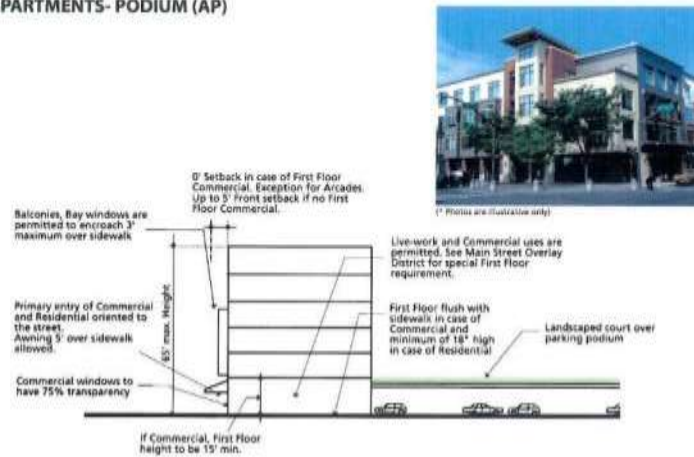
(* Photos are illustrative only)

LOT OCCUPATION	Lot Area	2.5 acres maximum
	Lot Coverage	90% maximum
BUILDING SETBACKS	Front	5 feet minimum - 10 feet maximum
	Side	5 feet if lot line is on a street. 3 feet minimum - 10 feet maximum if adjacent to another lot line.
	Rear	3 feet minimum
FRONTAGE		N/A
BUILDING HEIGHT	Principal Building	65 feet maximum
	Out Building	N/A
PARKING	Spaces	maximum 2/unit - minimum 1/ unit
	Area	N/A
	Access	Entry from side, rear or front. In case of front access, width of access not to exceed 20 feet.
USES		Residential. First Floor could include Live-work. In case of Main Street Overlay District refer to "Apartments with Commercial".
DISTRICTS		Village Center District, Mixed-Use Village District, Residential District

The Form Based Code

Southfield Building Form Standard

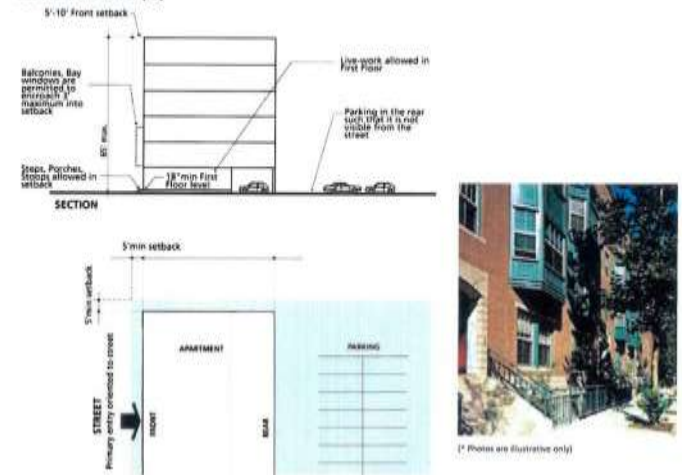
APARTMENTS- PODIUM (AP)



LOT OCCUPATION	Lot Area	2.0 acres maximum
	Lot Coverage	100% allowed
BUILDING SETBACKS	Front	No setback allowed if First Floor is Commercial. For Arcades, 8 feet maximum First Floor setback is allowed. In case of First Floor Residential, 5 feet maximum setback is allowed.
	Side	No required setback. 10 feet maximum setback permitted.
	Rear	No required setback
FRONTAGE		N/A
BUILDING HEIGHT	Principal Building	65 feet maximum
	Out Building	N/A
PARKING	Spaces	maximum 2 (tandem allowed)/unit - minimum 1/unit
	Area	N/A
	Access	Front, side or rear access not to exceed 20 feet width.
USES		Residential. First Floor could include Live-work and Commercial uses. See Main Street Overlay District for special First Floor requirement.
DISTRICTS		Village Center District, Mixed-Use Village District

Note: No Parking or Loading Bays required for Commercial under 4,000 sq. ft. Gross Floor Area. Commercial greater than 4,000 sq. ft. Gross Floor Area requires 1 parking space/ additional 300 sq. ft. Gross Floor Area and Loading Bays as per the Regulations.

APARTMENTS (A)

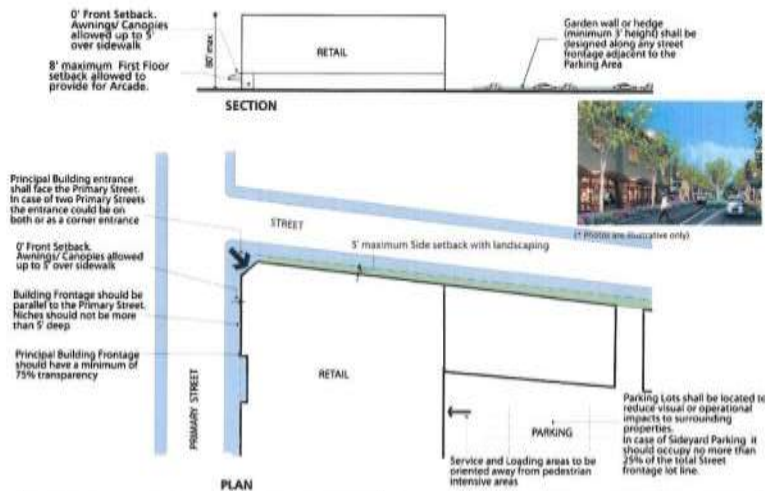


LOT OCCUPATION	Lot Area	2.5 acres maximum
	Lot Coverage	90% maximum
BUILDING SETBACKS	Front	5 feet minimum - 10 feet maximum
	Side	5 feet if lot line is on a street. 3 feet minimum - 10 feet maximum if adjacent to another lot line.
	Rear	3 feet minimum
FRONTAGE		N/A
BUILDING HEIGHT	Principal Building	65 feet maximum
	Out Building	N/A
PARKING	Spaces	maximum 2/unit - minimum 1/ unit
	Area	N/A
	Access	Entry from side, rear or front. In case of front access, width of access not to exceed 20 feet.
USES		Residential. First Floor could include Live-work. In case of Main Street Overlay District refer to "Apartments with Commercial".
DISTRICTS		Village Center District, Mixed-Use Village District, Residential District

The Form Based Code

Southfield Building Form Standard

ANCHOR RETAIL (AR)

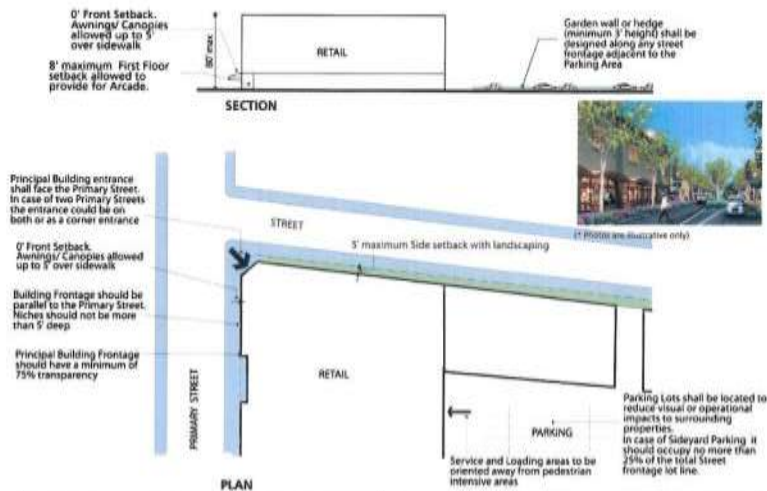


LOT OCCUPATION	Lot Area	1.0 acre minimum - 7.5 acres maximum
	Lot Coverage	90% maximum
BUILDING SETBACKS	Front	75% of Frontage built to lot line, 5 feet maximum setback for 25% of Frontage. For Arcades 8 feet maximum First Floor setback is allowed.
	Side	5 feet maximum
	Rear	No required setback
FRONTAGE		N/A
BUILDING HEIGHT	Principal Building	80 feet maximum
	Out Building	N/A
PARKING	Spaces	3 spaces minimum - 4 spaces maximum/ 1000 sq.ft. Gross Floor Area
	Area	N/A
	Access	Rear or side access
LOADING BAY		As per Regulations
USES		Anchor Retail, Theater, Movie/ Play House, Health and Fitness, Restaurant and General Services.
DISTRICTS		Village Center District

The Form Based Code

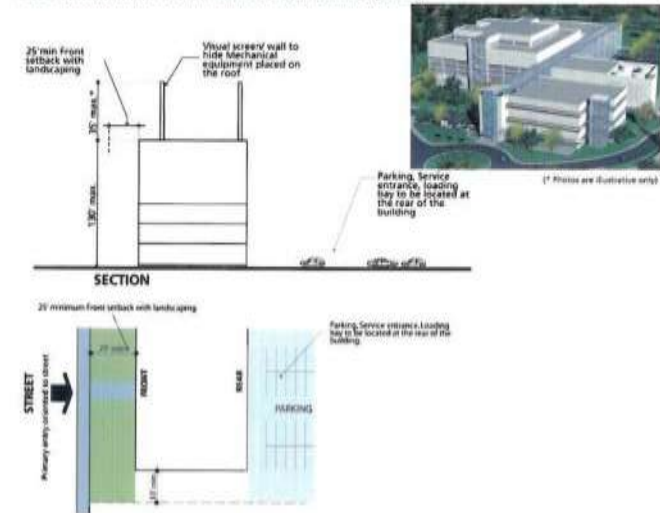
Southfield Building Form Standard

ANCHOR RETAIL (AR)



LOT OCCUPATION	Lot Area	1.0 acre minimum - 7.5 acres maximum
	Lot Coverage	90% maximum
BUILDING SETBACKS	Front	75% of Frontage built to lot line. 5 feet maximum setback for 25% of Frontage. For Arcades 8 feet maximum First Floor setback is allowed.
	Side	5 feet maximum
	Rear	No required setback
FRONTAGE		N/A
BUILDING HEIGHT	Principal Building	80 feet maximum
	Out Building	N/A
PARKING	Spaces	3 spaces minimum - 4 spaces maximum/ 1000 sq.ft. Gross Floor Area
	Area	N/A
	Access	Rear or side access
LOADING BAY		As per Regulations
USES		Anchor Retail, Theater, Movie/ Play House, Health and Fitness, Restaurant and General Services.
DISTRICTS		Village Center District

BIOPHARMACEUTICAL MANUFACTURING (BPM)



LOT OCCUPATION	Lot Area	1.0 acre minimum - 11.0 acres maximum
	Lot Coverage	90% maximum
BUILDING SETBACKS	Front	25 feet minimum
	Side	10 feet minimum
	Rear	20 feet minimum
FRONTAGE		N/A
BUILDING HEIGHT	Principal Building	130 feet maximum to the highest level of the roof and 35 feet maximum for mechanical equipment placed on the roof*.
	Out Building	N/A
PARKING	Spaces	3 spaces/ 1000 sq.ft. Gross Floor Area
	Area	N/A
	Access	Front, side or rear access not to exceed 20 feet width.
LOADING BAY		As per Regulations
USES		Biopharmaceutical Manufacturing. Accessory Commercial permitted.
DISTRICTS		Shea Village Commercial District (except for Shea Village Transition Overlay District)

NOTE: * Stack heights are excluded from 35' maximum height restrictions of mechanical equipment on the roof.

The Form Based Code

Southfield Administration Process

	Permitted Form for Principal Use	Permitted Form for Secondary or Accessory Use	Central Redevelopment Area								Perimeter Area		
			VCD	MUVD	RD	SVCD	GOSD	RecD	OS-C	CGD	OS-A	OS-R	OS-W
Commercial													
Anchor Retail	AR	n/a	Y	N	N	SP	N	N	N	N	N	N	N
Bed and Breakfast	SF < 5, SF > 5, TH1, TH2	n/a	Y	Y	SP	N	N	N	N	N	N	N	N
Conference Center	n/a	n/a	SP	N	N	SP	N	N	N	N	N	N	N
Day Care Center	NC	AC ² , AP ² , O/C, LI, BPM,	Y	Y	SP	Y	Y ^{3,4}	N	N	N	N	N	N
Funeral Home	NC, SF < 5	n/a	Y	Y	SP	N	N	N	N	N	N	N	N
General Services	NC, O/C	AC ² , AP ² , LI, BPM, AR	Y	Y	SP	Y	N	N	N	N	N	N	N
Health/Fitness Clubs	NC, O/C	AC ² , AP ² , LI, BPM, AR	Y	Y	N	Y	Y ^{3,4}	Y	N	N	N	N	N
Hotel	O/C	n/a	Y	SP	N	Y	N	N	N	N	N	N	N
Hotel, Boutique	NC, O/C	n/a	Y	Y	N	Y	SP ^{3,4}	N	N	N	N	N	N
Medical Laboratory	NC, O/C	n/a	Y	N	N	Y	N	N	N	N	N	N	N

A Apartments; AC Apartments with Commercial; AP Apartments – Podium; SF < 5, Single Family House - up to 5,000 sq.ft. lot; SF > 5, Single Family House - 5,000 to 10,000 sq.ft. lot; TH1 Townhouse – 1; TH2 Townhouse – 2; O/C Office / Commercial; NC Neighborhood Commercial; AR Anchor Retail; LI Light Industrial; BPM Biopharmaceutical Manufacturing; All Res. Refers to All Residential Building Forms; n/a Not Applicable

